

TECHNOLOGY DEPARTMENT

Modern packaging

For cover story see p. 99



January 1948



SHOULD THE RIGHT ADHESIVE BE?

RELY on National ... with its interest in your individual requirements ... for an adhesive that will be flexible enough to meet all plant and field variations.

Let's look at some individual requirements. A hard luggage adhesive should be easily handled and versatile. It should adhere vulcanized fiber to plywood ... 'draw on' leather to wood, fabric, paperboard, etc., ... bond wood molding inside sample cases ... laminate multiple plies of veneer before shaping under heat and pressure ... and offer exceptional resistance to weather and fungus. A soft luggage adhesive should leave bonded leathers and treated fabrics with an outstanding softness and pliability.

An upholstering adhesive should provide adequate

tack and speed for hand adhering cloth to cloth, chip-board, wood, wadding, etc. It should be free from residual odor and any tendency to penetrate and stain light fabrics.

A labeling and overcoating adhesive should bond to wood, fiber, painted steel, tin and glass. It should be weather-proof, vermin-proof, age-proof.

It doesn't matter whether your adhesive problem is a run-of-the-mill packaging, converting, assembling job or a brand new postwar problem. National is interested in creating an adhesive formula that will meet your individual requirements ... provide sufficient flexibility for material and commercial variations ... withstand all extremes of shipping and consumer uses. Your inquiry is invited — NOW!

• Offices: 270 Madison Avenue, New York 16; 3641 So. Washtenaw Avenue, Chicago 32; 735 Battery Street, San Francisco 11, and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto. In England: National Adhesives, Ltd., Slough.

National
ADHESIVES

EVERY TYPE OF ADHESIVE FOR EVERY INDUSTRIAL USE

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MAR 4 - 1948
DETROIT



DEPENDABILITY is a principle and practice of good business; a quality that is dominant in the background of organizations that strive to do every job as it should be done. Dependability is reflected in the products and service of good suppliers, and consequently, in the products and service of their customers. Phoenix Metal Cap Co., Chicago 8 and Brooklyn 18-

Modern packaging



Vol. 21 No. 6 February 1948

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Lifebuoy Soap, manufactured by Lever Brothers Company, of Cambridge, Mass., is another outstanding product now being packaged on Type 23 High Speed Cartoning Machines.

For many years, Lever Brothers had been using two types of machines for packaging its popular Lifebuoy Soap. One machine wrapped the bar, and then wrapped bar was transferred to second machine for cartoning.

When Redington was approached with this packaging problem, its engineers, combining their experience in both wrapping and cartoning, adapted the Type 23 machine to take over both jobs—and do them faster!

This machine receives the soap on an intake conveyor, cuts a waxed paper wrapper from a paper roll, wraps bar

and seals the folds. As wrapped bar moves into position, a carton is fed from magazine and expanded. Machine inserts bar into carton, then tucks in the end flaps. This continuous, cost saving operation takes place 175 times each minute!

This high speed machine is provided with several safety features that prevent marring of the soap bars and insure smooth flawless performance. A skip carton mechanism prevents empty carton from being discharged from machine. Many other features, always typical of Redington, are incorporated.

It is wise for you to give periodic critical inspection to your own packaging equipment. If you seek information or advice about a particular cartoning problem, call on Redington—and let us show you how to solve it.

F. B. REDINGTON CO. (Est. 1897) 110-112 S. SANGAMON ST. CHICAGO 7, ILL.

1897 **REDINGTON** 1948
51 Years of Packaging Leadership

AUTOMATIC CARTONING • WRAPPING • SPECIAL PACKAGING



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dexed in the *Industrial Arts Index*.



Member of Audit Bureau of Circulations

THE PACKAGE SMASHERS

THE POSTAL AUTHORITIES," said a recent letter to our Reader Service, "have developed their package-smashing machinery to such a high degree of technical efficiency that we are forced to look to you for help."

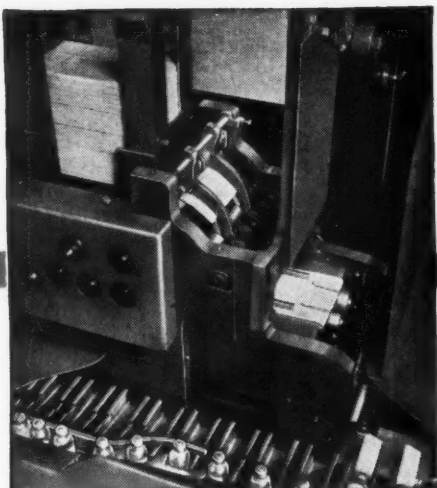
We could only suggest to this reader that he purchase the best possible shipping-package materials, cushion his product carefully and hope for the best. Apparently the Post Office Department takes the same view.

After numerous complaints, the Toilet Goods Assn. recently conducted a canvass of members which revealed a staggering increase in parcel-post loss and damage in the last year. A letter to the Post Office Department brought a reply pointing out that there has been an unprecedented volume of shipments in recent months; that unavoidable congestion and delay at transfer points has resulted and—in effect—that faith should be put in the package and not in the tender care of overworked mail handlers.

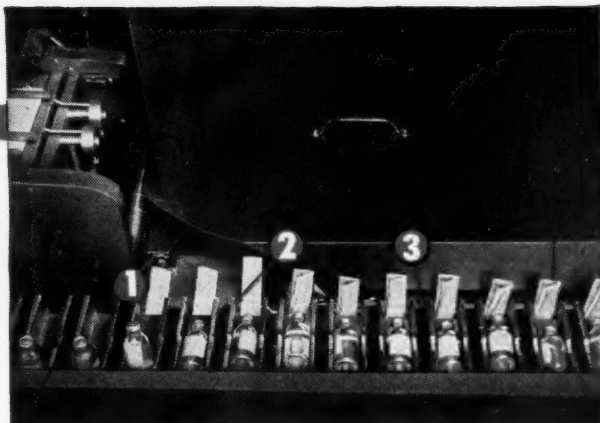
Soaring loss and damage figures are not peculiar to parcel post, but are noted in every type of shipment—and, with the enlarged European-aid program putting new strains on our transportation system, the situation is likely to get worse before it gets better.

Fortunately, good quality shipping-container and packing materials are once more available. The place to attack the shipping-loss problem is in your own shipping room. Stay away from inferior packaging materials. Make sure that extra cushioning is provided at all points of immediate contact with outside shock. See that your products are so securely protected as to withstand the most brutal kind of handling—because that's what they're going to get for a long time yet.

The Editors



Flat leaflet is positively fed from the bottom of the stack. Three folds are made in sequence.



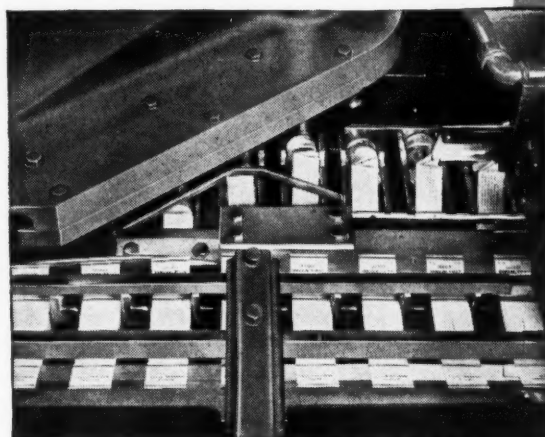
Leaflet is placed in accurately milled slot under bucket at station 1. Starwheel turns one end of leaflet upright at station 2. Leaflet is now held securely by slot under bucket and guide rail, 3.

**ONLY THE
FINEST CARTONER
CAN GIVE YOU THE
LOWEST
CARTONING COST**

If your cartoned product includes a leaflet or booklet, a Jones Cartoner will guarantee long, uninterrupted runs at high speeds—will give you lowest cartoning costs.

The Jones leaflet folder mechanism automatically handles flat leaflets, folding them one, two, or three times. Where greater printing area is desired, pre-folded leaflets or booklets can be fed from a magazine and inserted into the carton.

The leaflet is completely controlled at all times, eliminating danger of crumpling the leaflet or jamming the load. The illustrations above show the simplicity of operation—the complete absence of complicated mechanisms.



(View from opposite side of machine. Sequence of loading operations is from right to left.) As the load enters the carton, leaflet is folded over top of load.

Jones' method of leaflet handling is another of many basic superiorities that guarantee long, uninterrupted runs at high speeds—give you lowest cartoning costs. Compare your present cartoning methods with Jones Cartoning. Write today for complete information.

R. A. JONES & COMPANY, INC.

P. O. Box 485

CINCINNATI, OHIO

THE MAJORITY OF AMERICA'S CARTONED PRODUCTS ARE JONES CARTONED

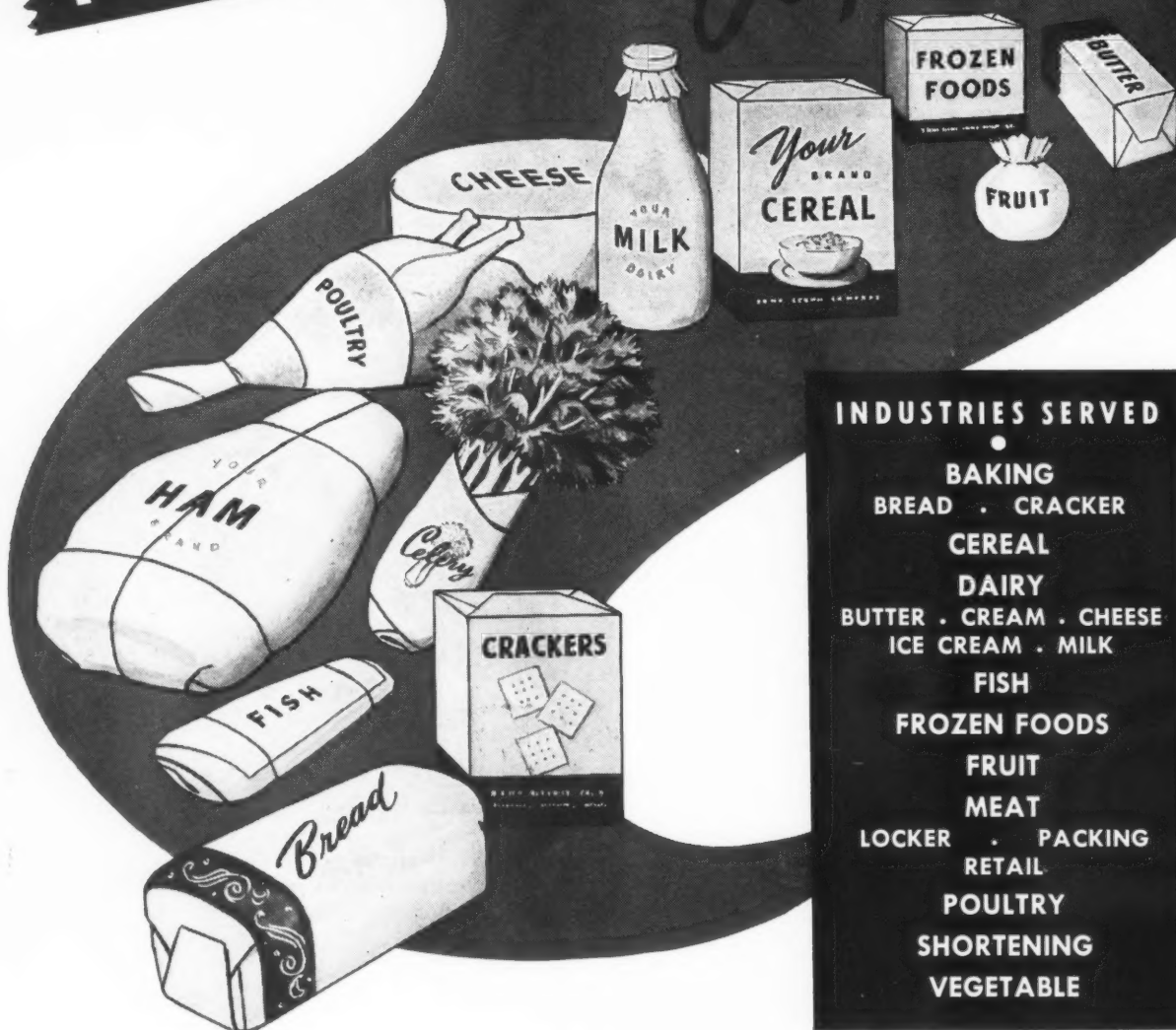
FEBRUARY 1948

5



FOOD PROTECTION

Papers



INDUSTRIES SERVED

BAKING
 BREAD • CRACKER
 CEREAL
 DAIRY
 BUTTER • CREAM • CHEESE
 ICE CREAM • MILK
 FISH
 FROZEN FOODS
 FRUIT
 MEAT
 LOCKER • PACKING
 RETAIL
 POULTRY
 SHORTENING
 VEGETABLE

K V P P A P E R S
 PARCHMENT • WAXED
 GREASEPROOF • LAMINATED
 SPECIAL TREATED

PLAIN AND PRINTED • ROLLS • SHEETS • DIE CUT

Kalamazoo Vegetable Parchment Company

PARCHMENT • KALAMAZOO 99 • MICHIGAN
 BRANCH PLANTS: DEVON, PENNA. • HOUSTON, TEXAS



HYCAR AMERICAN RUBBER LATEX...

imparts valuable properties to pulp and paper

HYCAR latex added directly to the pulp in the beater or head box, or used as an impregnant for paper, imparts valuable properties not otherwise readily obtained.

Tear and wet strength are considerably increased. Resistance to oils, solvents and chemicals is obtained, with retention of good aging properties. The addition of Hycar also insures excellent flex life and scuff resistance, and in thick papers prevents separation of the laminations.

Thus, better physical properties may be obtained in high grade pulp. In other cases the use of lower grade stock may be permitted because of improved physical properties obtained by the use of Hycar latex. Paper is made adaptable to fields where it is not now used.

Present and potential applications for papers of this sort range from wallpaper to insoles, from gaskets to leather replacement material, from shelf liners to packaging papers.

HYCAR latex is very easy to use. In most applications no vulcanization is required. Normal drying times are used. And HYCAR latex is an inherently safe material to handle. *No solvent system is needed.*

We would be glad to work with you on any problems relating to the use of HYCAR latex. For more information, please write Department HI-1, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio.

Hycar
Reg. U. S. Pat. Off.
American Rubber

B. F. Goodrich Chemical Company

A DIVISION OF
THE B. F. GOODRICH COMPANY

GEON polyvinyl materials • HYCAR American rubber • KRISTON thermosetting resins • GOOD-RITE chemicals

FEBRUARY 1948



ACCENT ON SHOWMANSHIP!

Every Milprint package is first proven in the laboratory...tested for quality and strength...given stringent examination to insure maximum protection. Thereafter, the accent is on salesmanship. Special industry experts, creative artists, merchandising designers all pool their knowledge to create a package that sells itself...with brilliant new colors, fresh designs, powerful display

appeal and that extra ingredient that means additional sales from the shelf—SHOWMANSHIP.

If you feel that your package isn't doing the job—in today's tough, competitive market—let one of Milprint's packaging engineers show you how Milprint can inject new life into your sales by putting showmanship in your package.

**PACKAGES
BY
MILPRINT**

Packaging Headquarters to American Industry

MILPRINT Inc. SALES OFFICES IN ALL PRINCIPAL CITIES

PACKAGING CONVERTERS • PRINTERS • LITHOGRAPHERS

plants at | MILWAUKEE, PHILADELPHIA, LOS ANGELES, CHRISTIANA, PA.
SAN FRANCISCO, TUCSON, VANCOUVER, WASH., STOUGHTON, WIS.

general offices: MILWAUKEE, WISCONSIN MILLS AT DE PERE, WISCONSIN

BOSTITCHING

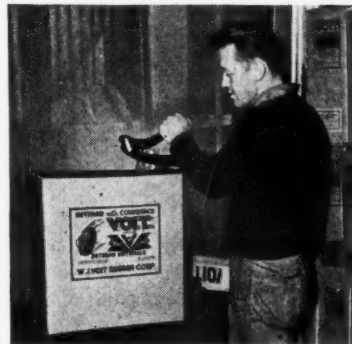
A complete line of shipping room tools to seal with steel

(Nearly 800 models for stapling, tacking, and wire stitching)



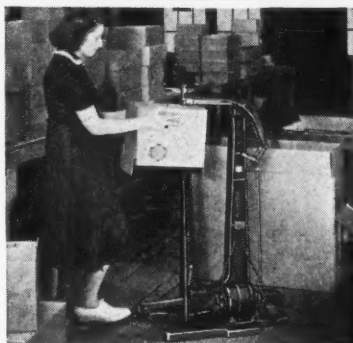
TOP SEALING

BOSTITCH Auto-clench seals tops of corrugated and fibre shipping containers *after* they are filled. No sealing blade to insert. Makes tight, firm clinch.



PORTABLE STAPLERS

FOR top sealing, bag sealing; fastening corners of fibre and corrugated containers. Great penetrating power.



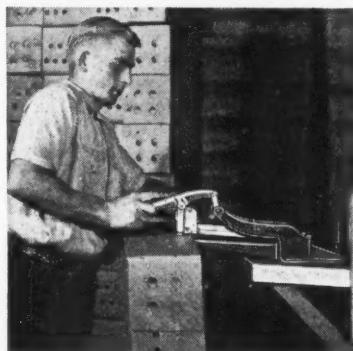
BOTTOM SEALING

VARIOUS models for stapling and stitching bottoms of fibre and corrugated containers up to 34 inches deep. Foot and motor driven.



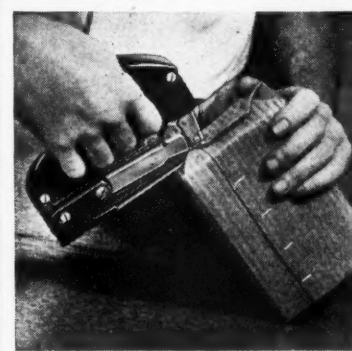
SELF-FEEDING HAMMERS

DRIVE staples like two-pointed tacks — one hand, one blow. Speed work attaching labels, tags, lining and covering crates and cases, tacking over barrels, etc.



BENCH STAPLERS

USED especially for making up boxes or, when mounted vertically, for sealing heavy bags. Attach to bench, table or post.



PLIER-TYPE

SEAL flexible corrugated wrappings . . . other light and fairly heavy containers. Easy withdrawal after staple is clinched.

BOSTITCHING

The use of the right stapling, tacking, or wire stitching machine and the most appropriate size and type of staple to achieve the most efficient fastening result.

Usually the fastest method . . . and most secure. Eliminates shipping room bottlenecks. Reduces damage claims.

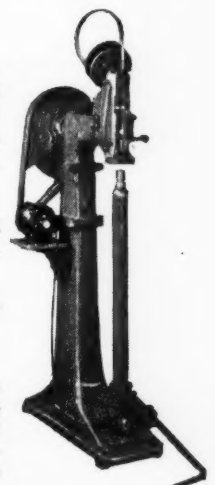
Bostitch provides not only machines for every kind of stapling and tacking job, but also machines suited to various production requirements and to the desired investment.

Users, starting with small, inexpensive equipment, can change to larger, faster Bostitch machines as conditions warrant. Experienced Bostitch field men, specializing exclusively in stapling, will be glad to discuss your requirements.

Please send literature checked: ☐ #175 Bag Sealing, ☐ #157 Carding, ☐ #132 Shipping. Bostitch, 508 Mechanic St., Westerly, R. I.



Bostitch Wire Stitches—make their own staples from a coil of wire. Especially suited to large production.



To all users of
Folding Cartons

Which
would
you
prefer?



... A \$500 MEERSCHAUM OR
A \$35 DRUM OF UPACO 3873

UPACO 3873, of course! Just put these reasons into your own well-seasoned business pipe...and inhale deeply. From a single drum of this clean, light-colored adhesive, a soap manufacturer, for instance, can seal 160,000 soap cartons. To the bookkeeping department this constitutes an income of about \$50,000. \$35 is a mighty small insurance premium to pay for one of the finest adhesives ever offered.

Top drying speed, good dilution and uniform quality are exceptional features that make UPACO 3873 a much-in-demand item. We recommend it for nearly all carton sealing machines, including those with circulating glue systems.

And it's no pipe dream that we sincerely appreciate inquiries on UPACO 3873 and other adhesives. Proof of this is the prompt, complete attention your letter or call receives.

THE UNION PASTE COMPANY
1605 HYDE PARK AVENUE • HYDE PARK, MASS.

Meerschaum Pipe, courtesy EHRLICH'S, Boston, Mass.

Super Salesmen

for your product

...*Eye Catching*

FOIL CARTONS

Selling all the time...plugging your product...acclaiming its high quality...inviting shoppers to choose *your* brand above all others—that's Laminated Foil Cartons by United, super salesmen among packages! These beautiful, gleaming cartons reflect light...catch the buyer's eye...stimulate impulse buying and *speed up sales*. You'll be amazed at the *selling power* these eye-appealing Foil Cartons can put behind your product. Let our engineers show you, at no cost to you. Write today for information and ideas.



UNITED BOARD & CARTON Corporation

285 MADISON AVENUE, NEW YORK 17, N. Y.

Board Mills:

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Carton Plants:

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FROM PULP TO PACKAGE



PULP



PAPERBOARD



PLANNING



LAMINATING



PRINTING



PACKAGE



Another
leading house
**PUTS
DUREZ
ON
TOP!**

AS experts in pleasing men of good taste, Alfred Dunhill Men's Toiletries, Limited, left nothing to chance in packaging this luxury line of toilet accessories.

Here is skilled use of color, sober yet warm in tone, expressed in substantial Durez plastic covers and screw caps. Here are firm, full-bodied shapes to fit the heft of a man's hand. Notice the fine combination of materials...wood and glass, and interesting natural-colored brass insets in the deep brown Durez closures.

The Alfred Dunhill job shows why we suggest Durez as a starting point when you want distinction in a luxury trade package. In products for mass distribution also, Durez cases and closures have

won wide preference for the same reasons. Being phenolic plastics, the Durez plastics are *versatile* to an unusual degree. They have eye-appeal, non-bleeding finish, excellent moldability, and real impact strength. Their resistance to moisture and to the action of mild acids and alkalies qualifies them for a broad range of package applications.

Whether you're just thinking of a new package, or just checking last details before giving your okay, we'll gladly work with you and your molder. Our specialized experience with the phenolics covers twenty-six years of leadership in the industry's development.

Durez Plastics & Chemicals, Inc., 292 Walck Road, North Tonawanda, N. Y.



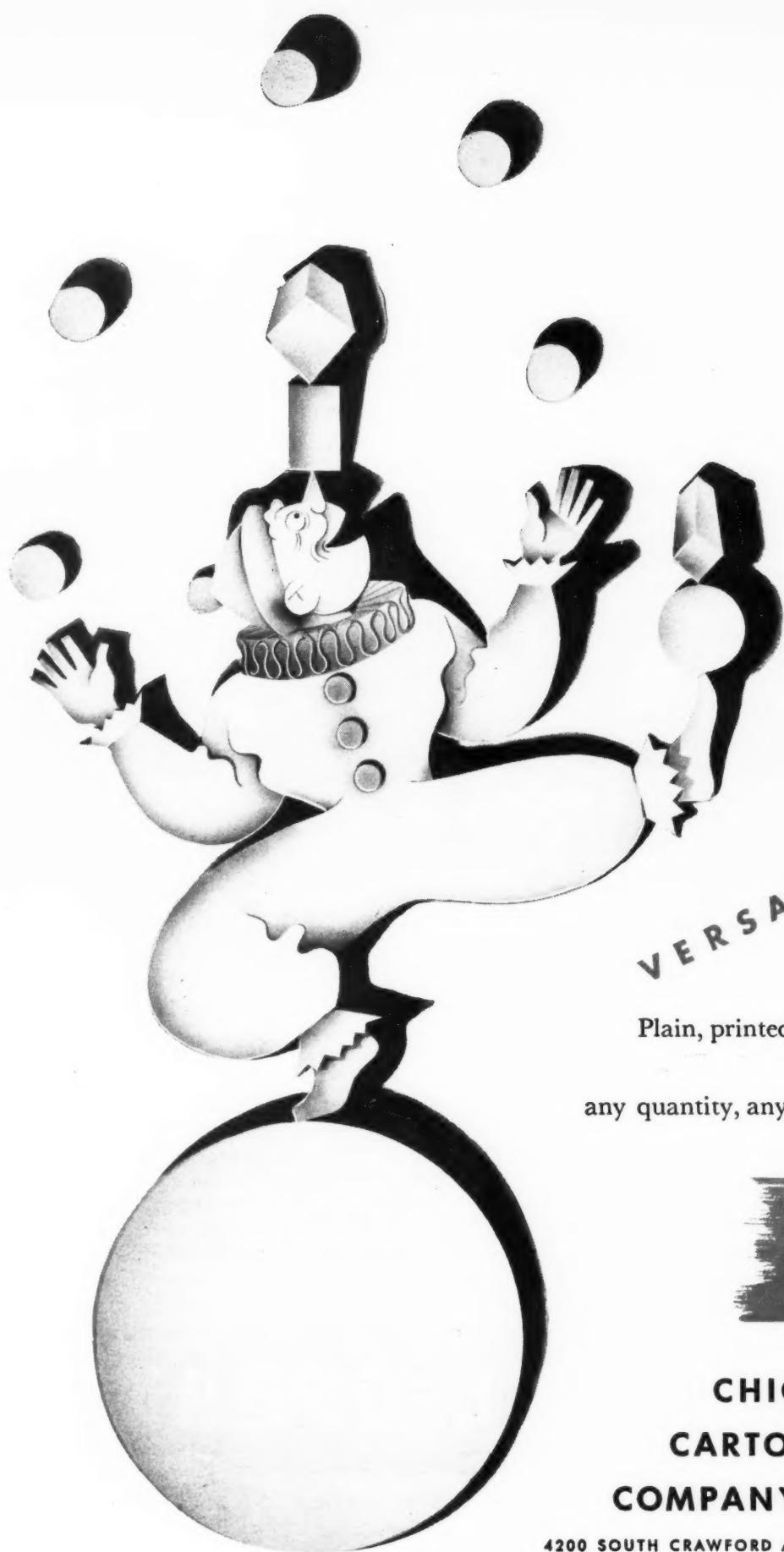
PHENOLIC
RESINS

MOLDING COMPOUNDS

INDUSTRIAL RESINS

PROTECTIVE COATING RESINS

PHENOLIC PLASTICS THAT FIT THE JOB



VERSATILITY

Plain, printed, laminated, paraffined,
any quantity, any kind, any size.



**CHICAGO
CARTON
COMPANY**

4200 SOUTH CRAWFORD AVENUE • CHICAGO 32, ILLINOIS

FEBRUARY 1948

13



"BETTER PACKAGING MEANS BETTER SALES"

MR. CELLOPHANE

PRE-PACKAGING and apples—there's a profit-building combination! Take a simple folding carton, add partitions for trouble-free shipment ... top with a heat sealed overwrap of Sylvania Cellophane to assure preservation of weight and flavor and you have a package that's a stand-out for sales appeal.

Sylvania Cellophane has just the qualities to maintain flavor and food value in so many fruits and vegetables. Every step in its manufacture is constantly checked. This careful control assures not only uniform transparency but the strength to stand up under repeated handling and automatic wrapping operations.

SYLVANIA CELLOPHANE

SYLVANIA DIVISION AMERICAN VISCOSE CORPORATION

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 350 Fifth Avenue, New York 1, N.Y.

Plant: Fredericksburg, Va.





Same capacity, but which design is best for your product?

Your new product, or the one you are bringing up to date, may require a container with more artistic features than are found in ordinary standard containers. At the same time, this container will have to perform well under speedy mechanical packing. In solving your problem, the designers must strike a fine balance and blend the artistic possibilities of glass with a practical, functional design that will work for you.

Armstrong's designers and production men are skilled in molding quality glass to meet your needs of individual products and processes. They can design and manufacture glass packages that will help solve new merchandising problems and make the quality of your product stand out on the retailer's shelves.

By having Armstrong plan your complete glass package—container and metal or molded cap, cork or crown closure—all of your special problems are solved at one responsible source. When desirable, design recommendations include a Du Pont CEL-O-SEAL* cellulose band. For quick service, contact your nearest Armstrong representative or write direct to Armstrong Cork Company, Glass and Closure Division, 6502 Prince St., Lancaster, Pennsylvania.



*TRADE-MARK REG. U. S. PAT. OFF., E. I. DU PONT DE NEMOURS & CO., INC.

Complete packaging service

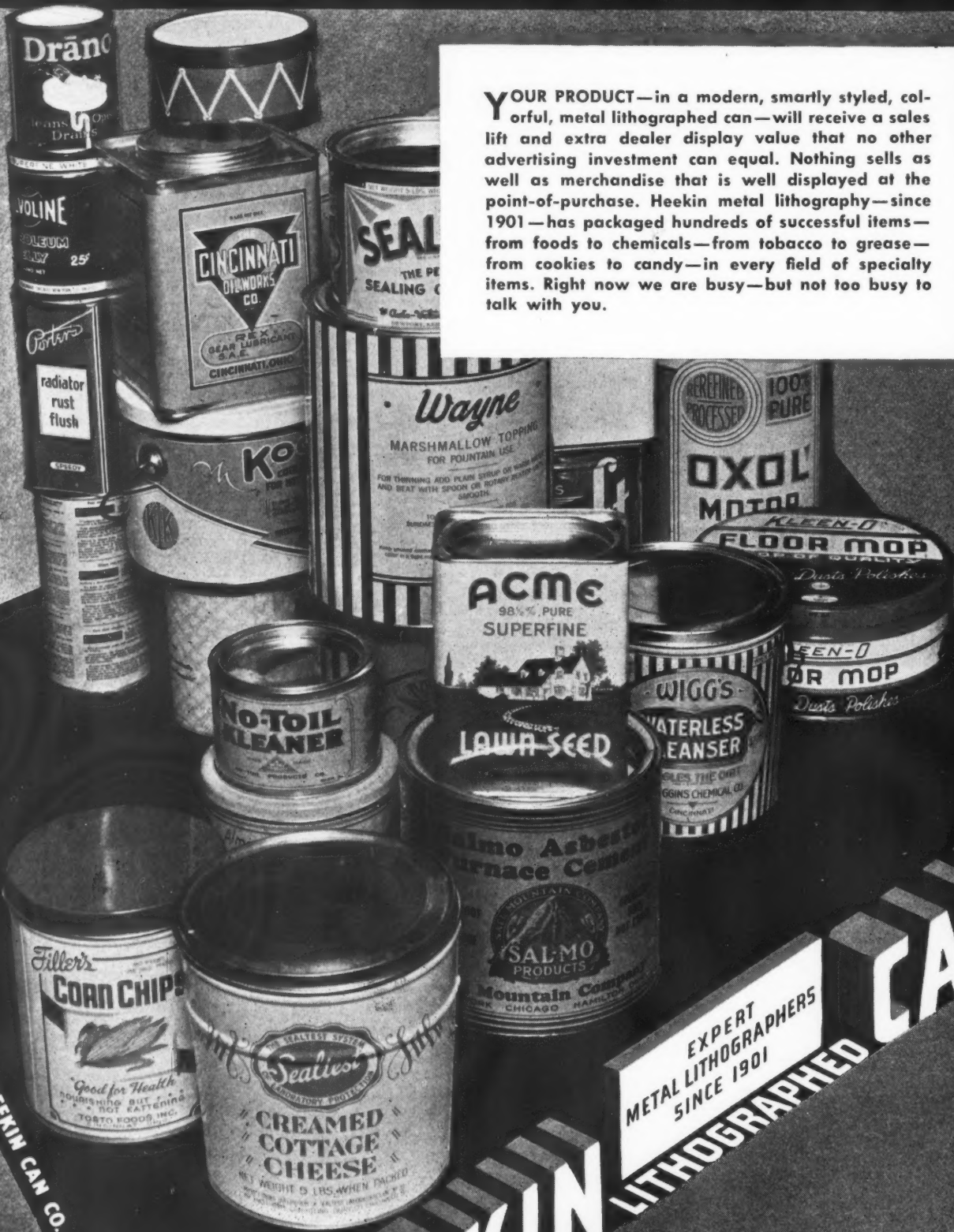
ARMSTRONG'S

GLASS and CLOSURES

LITHOGRAPHED METAL CANS FOR SPECIFIC INDUSTRIES

FOOD .. CHEMICAL .. BAKING .. CONFECTION .. HARDWARE .. PETROLEUM ..
OIL .. PAINT .. DRUG .. AUTOMOTIVE .. COSMETIC AND ALL OTHERS.

YOUR PRODUCT—in a modern, smartly styled, colorful, metal lithographed can—will receive a sales lift and extra dealer display value that no other advertising investment can equal. Nothing sells as well as merchandise that is well displayed at the point-of-purchase. Heekin metal lithography—since 1901—has packaged hundreds of successful items—from foods to chemicals—from tobacco to grease—from cookies to candy—in every field of specialty items. Right now we are busy—but not too busy to talk with you.



THE HEKIN CAN CO., CINCINNATI 2, OHIO

HEEKIN LITHOGRAPHED CANS
EXPERT
METAL LITHOGRAPHERS
SINCE 1901

ES

S.



*Kromekote**



THE CHAMPION PAPER AND FIBRE COMPANY HAMILTON, OHIO

District Sales Offices: NEW YORK • CHICAGO • PHILADELPHIA • DETROIT • ST. LOUIS • CINCINNATI • ATLANTA • SAN FRANCISCO

* Champion's Cast Control High Finish Paper, available in Box Wrap, Label, Litho, Postcard, Cover.

Charmers

On the Champs-Elysees... Fifth Avenue . . . Wilshire Boulevard . . . Rowell adds exciting charm to cosmetic boxes for face and dusting powder.

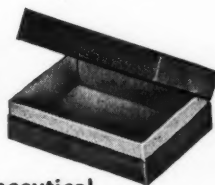
Sleek, gay, and attractive, they catch the feminine eye and find their way into the *tailleur* of the most sophisticated.



precision
color
printing



pharmaceutical
boxes



50 years'
experience



E. N. Rowell Co. Inc.
Manufacturers of Fine Paper Boxes

BATAVIA, N.Y.

Flocked Boxes

*...The Plus
that Sells!*

A Double Treat!

Use of Claremont Flock on
BARTON'S* THREE-TIER CANDY GIFT-BOX

Creates the Allure of Alligator Velour

A vibrant red-flocked top tier . . . a warm gray-flocked middle tier . . . and a snowy white-flocked and red-bordered third tier . . . All three exquisitely simulated in alligator grain . . . A touch of luxury to contents luscious!

Claremont Flock (cotton, rayon and wool) in 18 shades and colors, offers limitless packaging applications. Color charts, details and samples available upon request. Inquiries invited!

Box Designed for

BARTON'S

Bonbonniere

17 Stores in
NEW YORK



Candy gift-box pictured,
courtesy of Barton's Bonbonniere
... manufactured by Paragon Box Corp.,
249 Willoughby Street,
Brooklyn 1, New York

CLAREMONT
WASTE MANUFACTURING
COMPANY

CLAREMONT
N. H.

It's *Glass* for cleanliness...



NOTHING can be cleaner or more sanitary than the hard, smooth, brilliant surface of a glass container. Food packed in glass gives absolute assurance that it will remain clean and sanitary until entirely used. Glass is inert—adds no foreign taste or aroma to its contents. All the flavor, quality, color and tasty goodness are protected by an Anchor-glass container. It is easy to open, easy to reseal and easy to keep clean. Your products reach consumers exactly as you pack them. Remember, too, "cleanliness" is only one of the many reasons why glass containers will help sell your products.



AND IT'S *Anchorglass* FOR MAXIMUM CLEANLINESS

PRODUCTS OF
ANCHOR HOCKING GLASS
CORPORATION
LANCASTER, OHIO

"Crime Photographer," Thursday evenings, entire CBS network, sells all America on glass-packaged products.



WHEN we tell you that Oxford has important distributors in 48 key territories from Portland, Maine, to Portland, Oregon, from Minneapolis to Little Rock, that's only part of the story.

For these paper merchants are more than geographical sources of supply. They are an integral part of the Oxford distributing machinery to supply you with the right Oxford paper to do your job best.

So you'll find these merchants capable in understanding your requirements and matching them to one of Oxford's quality papers

that will suit your printing needs. You'll find they have a selection wide enough to satisfy many of your printing paper preferences. Remember, too, that every Oxford paper is top quality in its class. High standards are set and maintained because of the high skill of our veteran papermakers plus the

control of 5,000 quality tests of each day's production.

And behind it all is Oxford's many years' experience in making over a thousand miles of quality paper a day. So when you need quality paper ideally matched to your job, call in your nearest Oxford paper merchant.



Included in Oxford's line of quality printing and label papers are: Polar Superfine Enamel, Maineflex Enamel Offset, Maineflex C1S Litho, Mainefold Enamel, White Seal Enamel, Engravatone Coated, Carfax English Finish, Super and Antique, Aquaset Offset and Duplex Label.

OXFORD PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N. Y.

*MILLS at Rumford, Maine
and West Carrollton, Ohio*

*WESTERN SALES OFFICE:
35 East Wacker Drive, Chicago 1, Ill.*

*DISTRIBUTORS
in 48 Key Cities*

Famous Plastics

PLASKON

TRADE MARK REGISTERED
MOLDED COLOR



Max Factor
HOLLYWOOD

The Max Factor Hollywood molded Plaskon trays measure: Gray, 15½" x 10½" x 1¾"; Red, 15" x 8½" x 1¾". These trays are molded by Plastic and Die Cast Products Corp. of Los Angeles, California.

PLASKON DIVISION
LIBBEY-OWENS-FORD GLASS CO.

2128 Sylvan Avenue, Toledo 6, Ohio • In Canada: Canadian Industries, Ltd., Montreal P. Q.

...FOR FAMOUS PRODUCTS

A leader in the cosmetic industry, Max Factor Hollywood now introduces these new make-up sets in beautiful Plaskon Molded Color tray containers.

Max Factor Hollywood has used Plaskon Molded Color for a great number of its packages and closures for many years. It has taken advantage of the *thermosetting* properties which include excellent dimensional stability, low water absorption, non-softening action from heat and ability to withstand common organic solvents.

Plaskon molding materials can be transformed into almost any distinctive, practical design or size of product. A wide range of clean, brilliant, permanent colors is available.

The hard, non-porous surface of molded Plaskon will not tarnish, check or corrode. It is impervious to the effects of alcohol, acetone, oils, waxes or greases.

Plaskon molding materials have many other features that meet special requirements in the drug, cosmetic, electrical, household appliance, garment and general industrial fields.

Write for free illustrated book showing many uses of Plaskon* urea-formaldehyde and melamine-formaldehyde molding materials in manufacturing and merchandising.

*Reg. U. S. Pat. Off.



ESTABLISHED 1876



Manufacturers of
PRESENTATION BOXES
JEWELRY FINDINGS AND SOLDERS
TROPHIES • MEDALS • BALL CHARMS

F. H. NOBLE & COMPANY 559 West 59th Street, Chicago 21, Illinois

*Don't be
surprised by this
shopper—*



She's a thrifty lass—today's shopper. Her mind is on her food budget, and her eyes are alert for the best values.

Smart merchandisers know that Cellophane packaging is an important help in selling this value-searcher. It *shows* her what she

wants to know about size, color, quality, etc. It tells her, too, that freshness and cleanliness are properly safeguarded—because Cellophane *protects* what it *shows*.

E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington 98, Delaware.

**DuPont
Cellophane**

Shows what it Protects
—at Low Cost



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

FEBRUARY 1948

25

Introducing **Plastafol***

The New ALL-TRANSPARENT FOLDING CARTON

A window-clear plastic box at a new low cost.

Ships flat . . . folds into shape in fractions of a second.

Available in large runs . . . tuck-end or glue-end.

Your message printed in permanent, scratch-proof color.

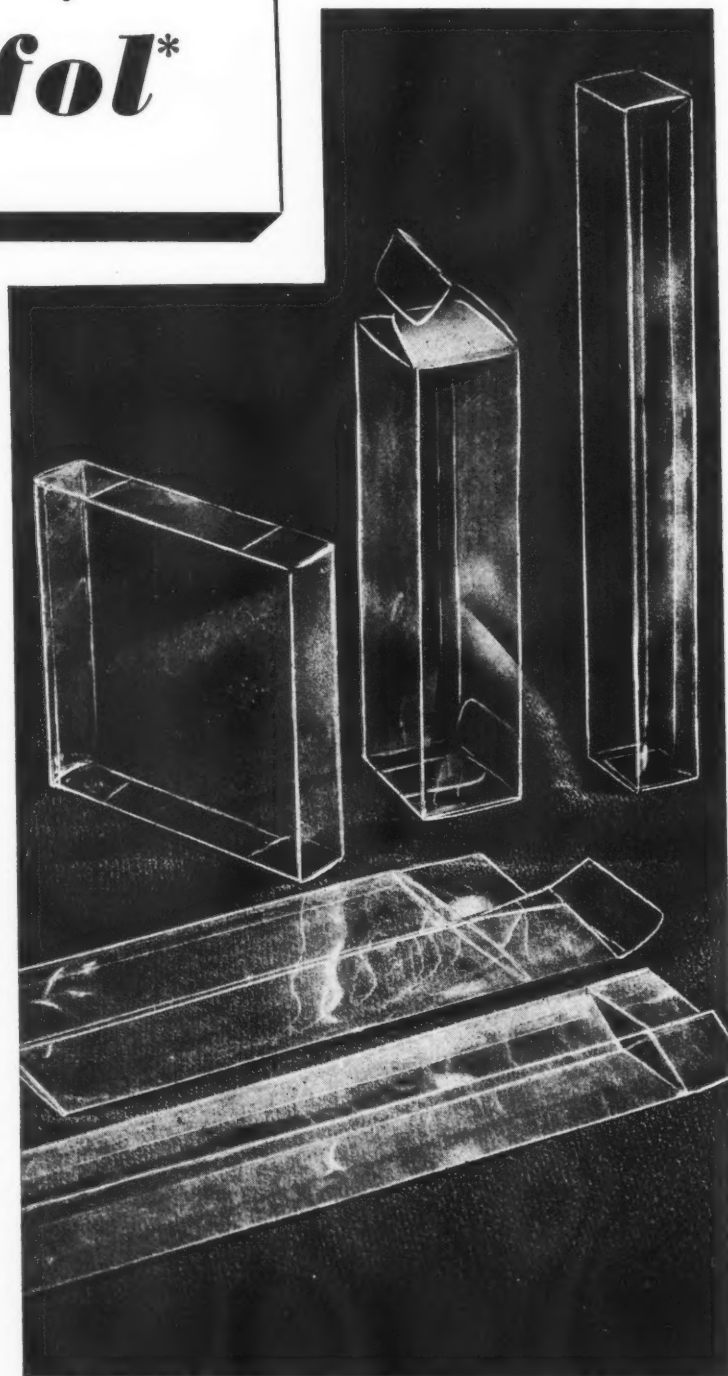
Now you can give your product all the extra sales appeal of individual packaging in transparent plastic cartons—at new low cost.

The new 100% transparent PLASTAFOL carton costs less per unit because it's mass produced by a patented process.

Folded flat for shipment, the PLASTAFOL carton saves freight—can be set up fast, by machine or by hand, with big savings in labor charges.

For very slight additional cost, we print your message on PLASTAFOL cartons in colors guaranteed not to scratch, rub or wash off.

Don't miss this new merchandising opportunity. Write today for information. We welcome comparison.



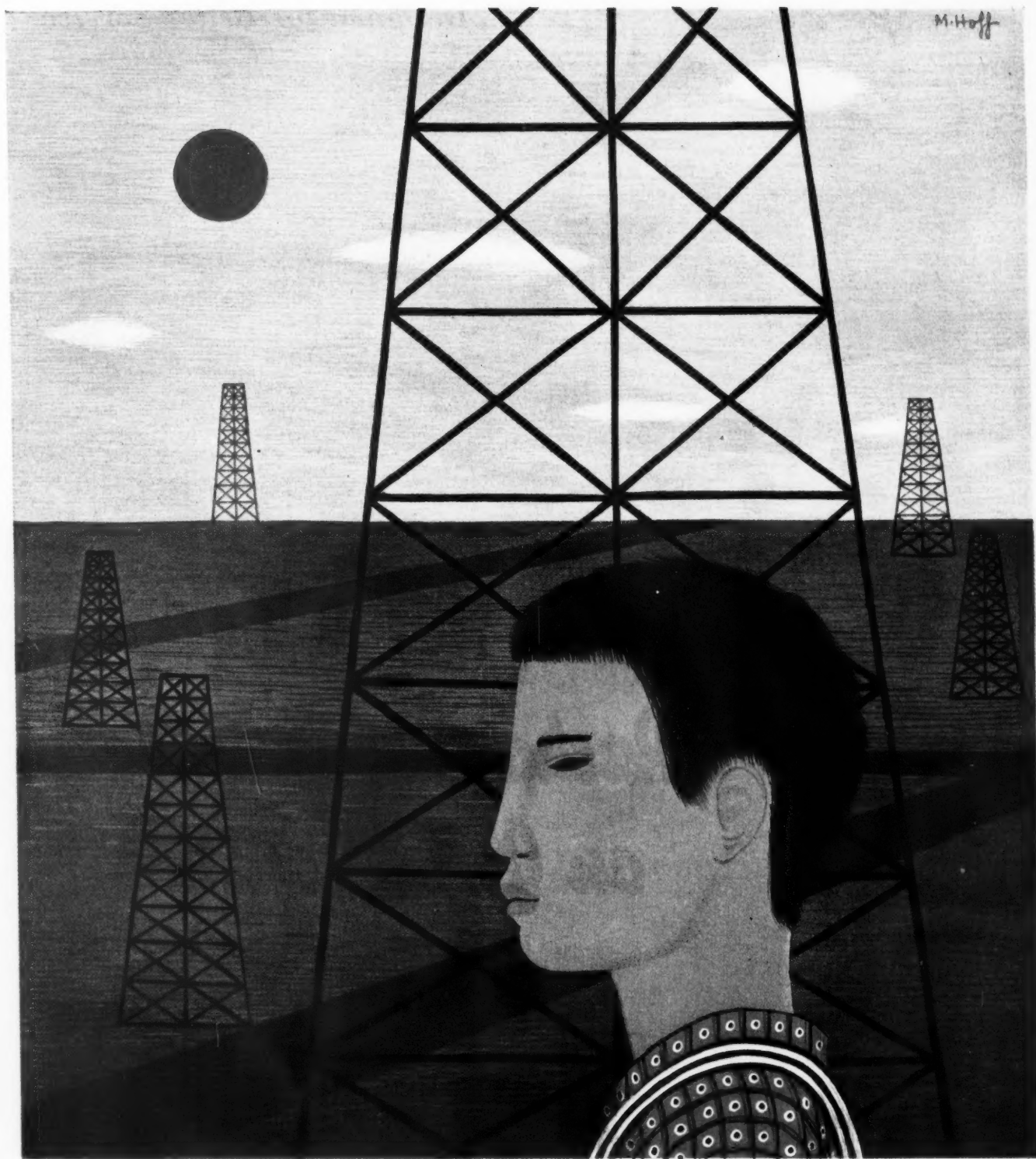
* Trademark

TROTH • BRIGHT • PAGE

Main Office and Plant:
Paoli, Pennsylvania

Sales Office:
Land Title Building, Philadelphia

The PLASTAFOL carton is protected by present and pending patents.



Artist — Margo Hoff, native of Oklahoma

OKLAHOMA — *annual purchases: \$1 billion — mostly packaged.*

CONTAINER CORPORATION OF AMERICA



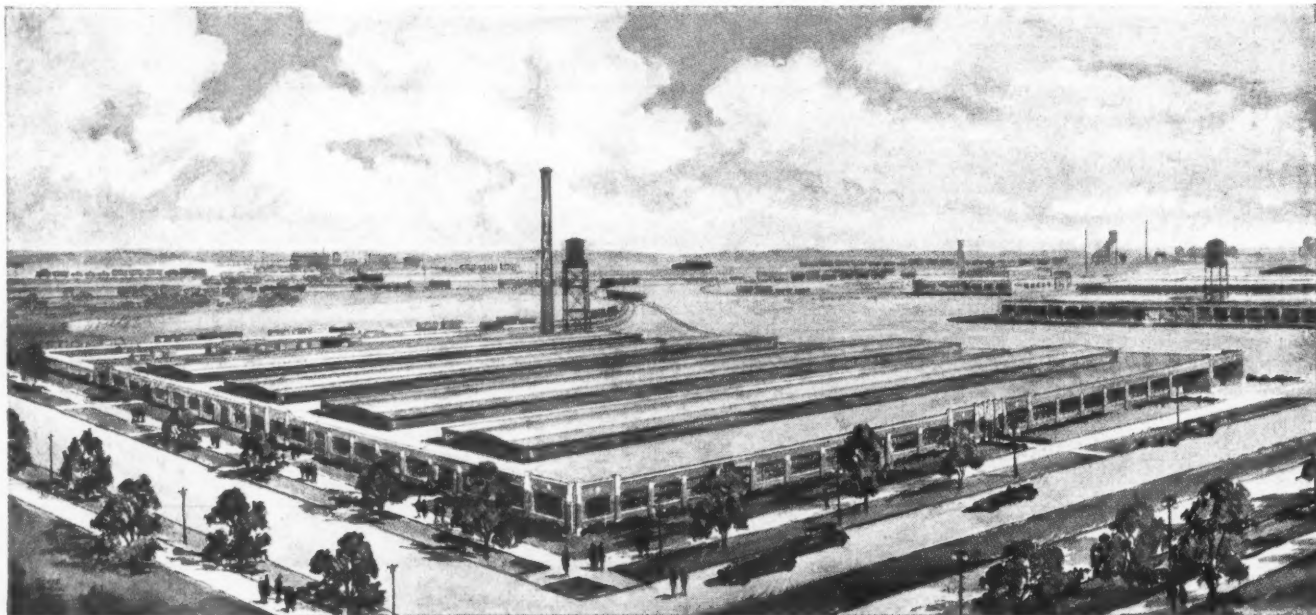
FEBRUARY 1948

27



Our New Modern Plant

... Designed for Better Service



Put Your Packaging Problems on Our Shoulders!

FOLDING CARTONS

SET-UP BOXES

CORRUGATED AND SOLID FIBRE

SHIPPING CONTAINERS

TELEPHONES
Chicago
PORTSMOUTH 3400
Long Distance
Summit 1600
Via La Grange, Ill.



ATLAS-BOXMAKERS, INC.

5025 WEST 65th STREET, CHICAGO 38, ILLINOIS

Now in New York City, to serve the Metropolitan area, Matthias Paper Corporation, New York City address—Hudson Terminal Bldg., 30 Church St., Telephone—Beekman 3-4573. Mr. Robert F. Feuss is our sales representative. Inquiries and orders for decorated paper for packaging, box manufacture, labels, bookbinding, toys and novelties, etc. solicited. Matthias Paper Corporation main office 165 W. Berks St., Philadelphia 22, Pa., Telephone—Regent 9-5301. In New England, mail address—Box 127, street address—12 Brook Street, Wellesley, Mass., Telephone—Wellesley 0098M. In the South, address—Guilford Bldg., Greensboro, N. C., Telephone—Greensboro 3-3177.

FOR
AMERICAN
PENCIL
COMPANY



Variable Designation Marking
on Boxes and Erasers

Marking

BY MARKEM . . . of course!

THE PROBLEM: To mark its erasers at high speed, giving number, trade name and name of manufacturer right on the rubber; also, to stamp the boxes which hold the erasers, and the boxes which hold the famous "Venus" pencils—both the individual packages of one dozen each and the large "six dozen" containers. That was the problem of American Pencil Co.

THE SOLUTION: Full use of Markem methods, machines and special inks. Now the names "Venus" and "Velvet" and all other necessary information are put on the erasers in one quick operation with Markem machines and inks. Boxes are marked swiftly, in harmony with the over-all package designs. Result: faster production; quick, sure identification all down the line — and another satisfied customer for Markem!

Let MARKEM solve your marking problem. Markem Service includes methods, machines and special inks to meet your individual requirements as to speed, material and purpose. Just tell us your problem; we'll do the rest.

MARKEM
MACHINE
COMPANY
KEENE, N. H.

FACILITIES FOR QUALITY PRODUCTION *



BERNARDIN

Metal Closures

Have you ever seen fine closures made? To go through the Bernardin plant in Evansville is to see for yourself the tremendous resources in men, machines and materials required to make the millions of Bernardin Closures used each year. Bernardin Bottle Cap Company, Evansville, Ind.

Since 1881—America's First Manufacturer of Metal Closures.

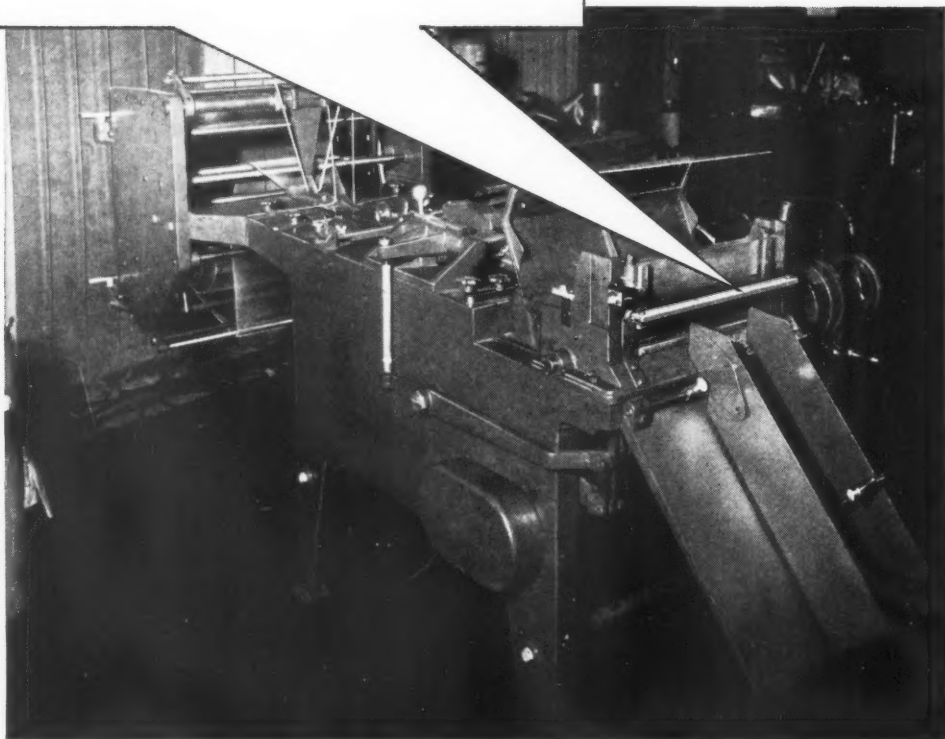
* Pictured — High speed automatic presses stamp and form Bernardin Closures with machine-gun rapidity.



**A GOOD PACKAGING MACHINE
BECOMES AN EVEN BETTER ONE**

*with this
continuous static eliminator!*

A GOOD BAG-MAKING MACHINE is made even better with an Ionotron Static Eliminator. Arrow shows location of Ionotron at delivery end of Shumann automatic bag maker, product of Shumann Equipment Company, Pittsburgh 10, Pa. Ionotron makes finished bags easier to handle and to fill, by eliminating static-caused cohesion of cellophane, Pliofilm, foil, or Glassine bags as well as adhesion to chute.



As a user or builder of packaging machinery, you know how badly static electricity can "gum up the works" . . . making stock difficult to handle . . . or causing irregularities in finished packages.

You can overcome many such problems easily and permanently with the Ionotron Static Eliminator* — a metallic bar which houses and shields a source of continuous alpha radiation. The alpha rays ionize the air in the trouble zone, and the ionized air conducts static to ground.

There's no contact with moving materials. No power connection is required. The Ionotron has no moving parts, so there's no operating expense. And its action is continuously and permanently effective!

Incredible? It's merely a simple application of a sound scientific principle whose effectiveness is now being re-proved daily on many kinds of packaging and printing machines. Why not see how it works on yours? Send us a complete description of your static problem and details of the trouble zone. Write Dept. M-2, U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.

*Trade-mark reg. U. S. Pat. Off.

OTHER PRODUCTS OF U. S. RADIIUM: LUMINESCENT MATERIALS: radioactive, fluorescent, phosphorescent • LUMINESCENT DIALS: radioactive, fluorescent • POWDERS: cathode-ray tube, television tube • RADIIUM LOCATORS: pendants, lenses, buttons, screws, markers • RADIOACTIVE FOILS (alpha-ray ionization sources) • HIGH-ACCURACY DIALS (nonluminescent) • SILHOUETTE ILLUMINATION of clocks, watches, and instruments LUMINOUS RETICLES and other specialties

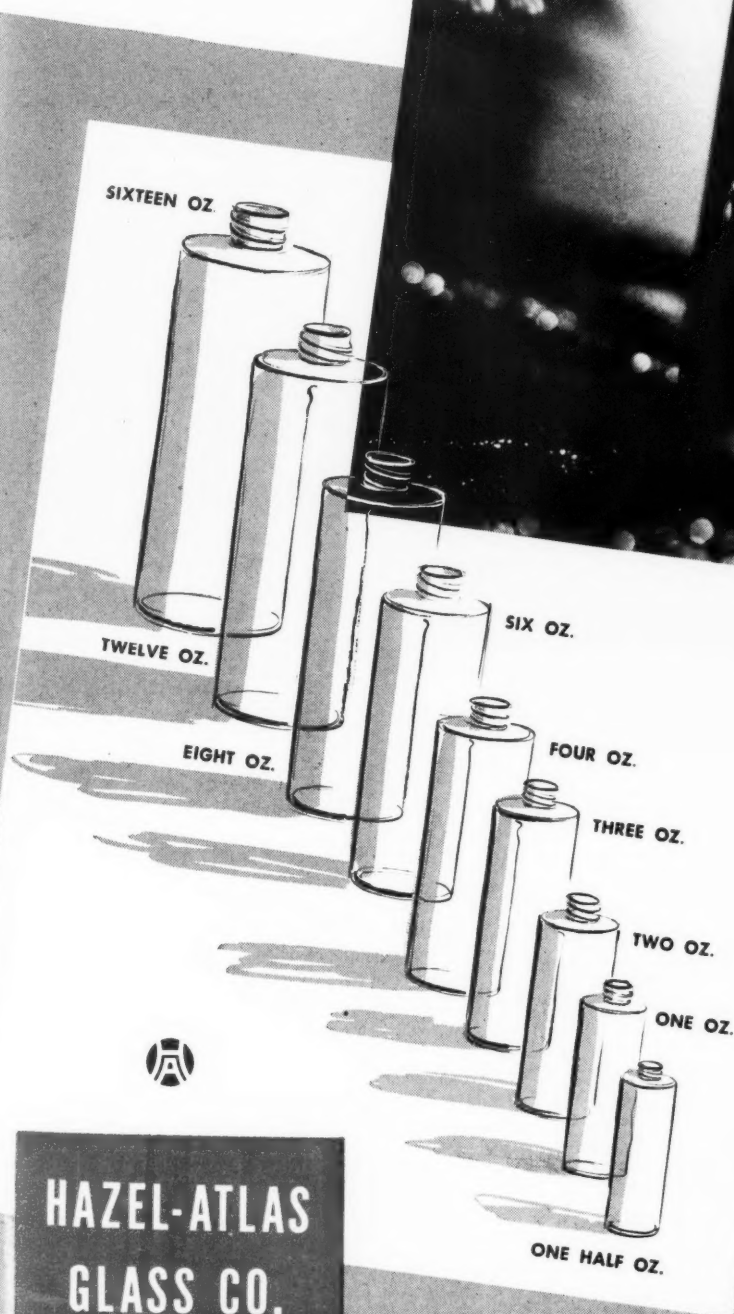


IONOTRON

Static

ELIMINATOR

Tall Cylinders by HAZEL-ATLAS



**HAZEL-ATLAS
GLASS CO.**

Wheeling, West Virginia

*Here's a complete line of
easy to label, easy to fill, good-
looking cosmetic containers.*

*Available in 1/2, 1, 2, 3, 4, 6, 8,
12 and 16 oz. sizes, they lend
themselves to a variety of products
from nail polish to cologne.*

Write for samples and specifications.

What man can imagine, man can do.



of the right equipment to compete in the post-war package-making market.

You can't meet post-war competition with standard jack-of-all-trades printing presses nor can you employ common practice methods. You need printing and converting equipment designed and built in correct combinations.

In display carton manufacture, the combination is rotary printing and die-cutting. For bread wrappers, it's printing and waxing. In box covers and trademark wrappers, it's a combination of color-coating, printing, and over-lacquering.

Crawford engineers work out just the right combination for you. They design

and build the equipment that starts with the parent roll and turns out top-quality packaging materials at highest speeds.

This combination of equipment, simplified, and geared together in single operating units, eliminates all intermediate operations and converts present costs into profits. It will catapult your production to a new high for out-in-front competition in the post-war market.

Let Crawford engineers survey your present operation. They will recommend and develop the right combination for you.

CONSULTING
DESIGNING
MANUFACTURING

Crawford
INCORPORATED
Engineering

BURDETT BUILDING
251 RIVER STREET
TROY, NEW YORK



**CAMBRIDGE
CONTAINERS**

attract Attention, too!

CAMBRIDGE CONTAINERS are de-
signed and built to attract attention
... create interest ... stimulate the
desire to buy ... and **MAKE SALES.**

CAMBRIDGE PAPER BOX COMPANY

196 Broadway, Cambridge 39, Mass.

New York City

Providence, R. I.

Rectangular & Round Boxes • Plastics • Labels & Allied Products

FEBRUARY 1948

35

Only plastic containers give you all these features that **STEP-UP SALES WHILE REDUCING COSTS!**

1. Transparency without breakage.
 2. No bulky packing material necessary (conserves space, reduces transportation costs)
 3. Non-inflammable
- plus features indicated next to photographs.

Celluplastic is the world's largest producer of plastic containers. One of the world's finest plastics plants. Established 1919. Blueprints, samples, etc., submitted quickly. For free sample containers, descriptive literature, information, write Celluplastic Corporation, 34 Avenue L, Newark 5, N. J.

COLOR—
clear, transparent
or opaque

**1/5 WEIGHT
OF GLASS**

SHATTERPROOF

SEAMLESS

for plastic vials, capsules,
boxes and special containers,
consult Celluplastic

ELIMINATE BREAKAGE
and expensive packing

**SAFETY BASE
PLASTIC**

LABELLED permanently right
in the manufacturing process
—imprinted in color

SHAPED to suit your
product—round, square,
long, short

ALSO CUSTOM EXTRUSION AND INJECTION MOLDING

Celluplastic Corporation

New York office: Rockefeller Center, 630 Fifth Avenue, Circle 6-2425 • Upper New York State: Dygert & Stone, Inc., 36 St. Paul St., Rochester, 4, N. Y. • West Coast: Container Service Co., 1266 Northwestern Ave., Los Angeles 27, Cal. • New England: Allen-Nelson Co., 603 Boylston St., Boston 15, Mass. • Michigan: L. T. Swallow & Associates, Boulevard Building, Detroit 2

COL R reaches out for sales



No telling why the young lady chooses a particular piece of candy; but you can be sure that fine packaging *in color* had a lot to do with her buying the candy in the first place.

More and more companies are turning to color lithography in packaging their goods because they have learned that *color reaches out for sales.*

For lithography at its best . . . it's L & S.



LUTZ & SHEINKMAN color lithographers

421 HUDSON STREET, NEW YORK 14, N. Y.



WHEN attractively labeled,
CARR-LOWREY OPAL JARS
lend themselves admirably to sales compelling
point of sale displays. For flawless quality, uni-
form density and brilliance, they are unexcelled.



Factory and Main Office: BALTIMORE 3, MD.

New York Office: 500 FIFTH AVENUE (18)

•

Chicago Office: 1502 MERCHANDISE MART (54)

Turns Out Low Cost PAPER CONTAINER Shapes and Designs



**M. D. KNOWLTON
AUTOMATIC CONVOLUTE
PAPER CAN WINDER**

Market-wise users or producers of containers know that attractive shapes and designs are a vital link in merchandising a product.

It is a simple function of the Knowlton Automatic Convolute Paper Can Winder to produce containers in wide variety and at a rate that keeps their costs at rock bottom. One operator will turn out as many as 150 can bodies per minute on this machine which winds and labels 5 at a time. Further adaptability is demonstrated in the broad variations in can body sizes and strengths: round or irregular shapes 1 3/4" to 8" in diameter or across diagonals, in 3 to 6 plies.

Today new avenues to handsomer packaging at lowered costs are being opened by the Knowlton Automatic Convolute Winder. Believe us, your phone call or letter will bring quick response in the form of its applications to your packaging problems.

BOSTON
637 Massachusetts Ave.
(ARLINGTON)



BROOKLYN
45-53 Beaver St.

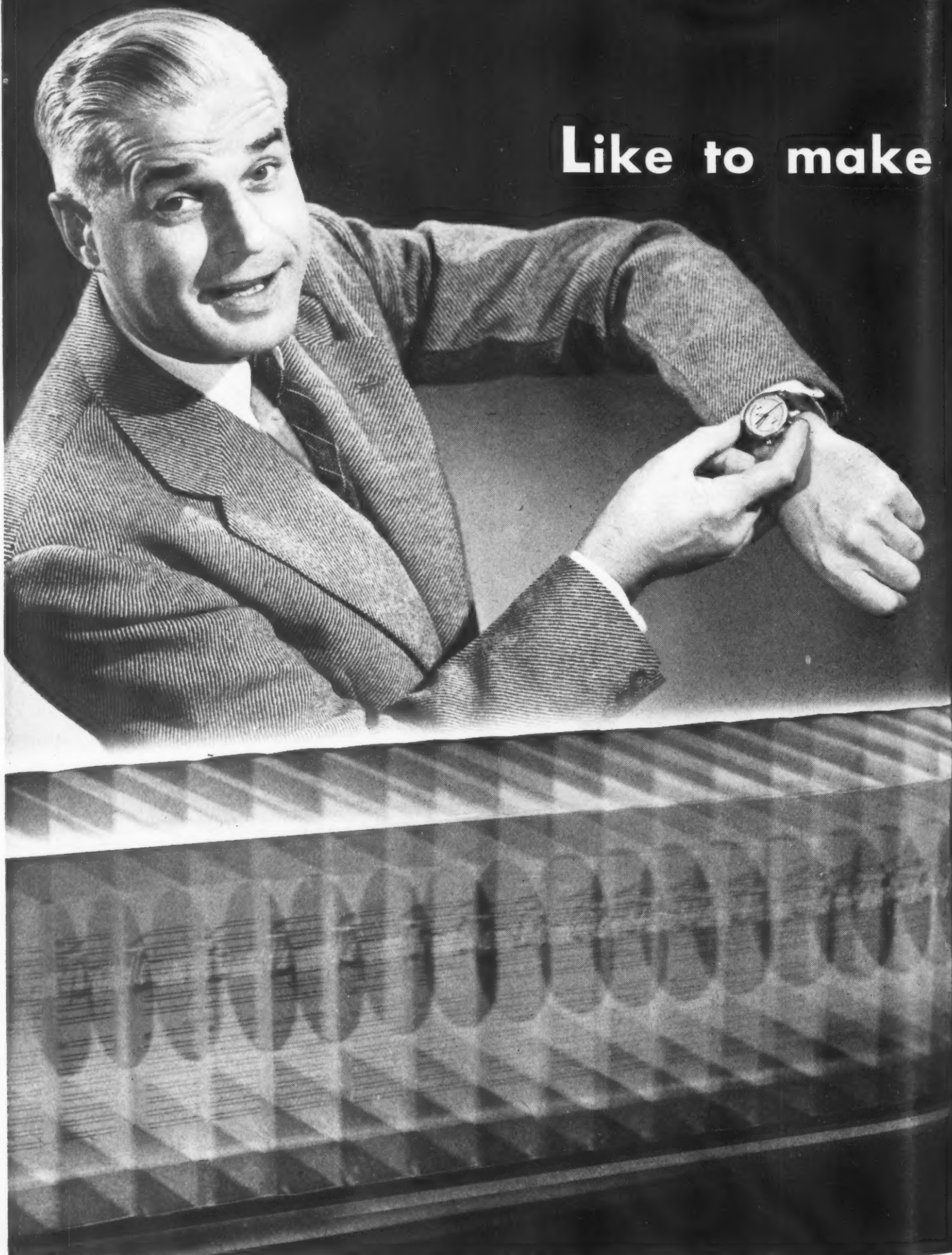
CHICAGO
9 S. Clinton St.

TORONTO, CAN.
260 Richmond St., W.

Pacific Coast Representatives
H. W. BRINTNALL CO.
Los Angeles, San Francisco, Seattle

ROCHESTER, NEW YORK

Like to make



e **your filling machines**

work 65 seconds a minute?

**THERE'S A GOOD CHANCE YOU CAN — WITH GARDNER-RICHARDSON CARTONS
THEY'RE PRECISION-ENGINEERED FOR EXTRA SPEED**

Suppose you could get . . . in 60 seconds . . . the production you're now getting through your filling machines in 63, 64, or 65 seconds. Would that be worthwhile? Figure out what it would mean per hour, per day, per week.

Making high speed filling machines do more work per minute—through Precision-Engineering—is something we've been specializing in for a long time, here at Gardner-Richardson.

Some of the largest users of folding cartons in the country are well aware of this. They've seen what happened when Gardner-Richardson teamed up with their operating men to step up filling machine production.

Sometimes, what looked like a trivial change has made a tremendous difference. In almost every case, Gardner-Richardson's Precision-Engineered uniformity has been an important factor in better performance.

We don't promise miracles. But give us an opportunity to study your specifications, your cartons and your operations. We believe we may be able to come up with recommendations that will have your filling machines "working more than the usual 60 seconds per minute." Ask for a Gardner-Richardson representative to call. It places you under no obligation.



**And remember . . . More eyes reach for your product
in cartons of COATED LITHWITE!***

Coated Lithwite is the quality clay-coated board . . . PLUS! Made the modern way, with an exactly level filmed-on coating. Whiter. Brighter. Holds up colors brilliantly, reproduces pictures with true-to-life realism. Folds, bends better, too. More receptive to adhesives. Rub-resisting. Fade-resisting. For a practical way to upgrade your cartons, investigate Coated Lithwite.

THE GARDNER-RICHARDSON CO.

Manufacturers of Folding Cartons and Boxboard, Middletown, Ohio

Sales Representatives in Boston, Chicago, Detroit, New York, Philadelphia, Pittsburgh, St. Louis

*Reg. U.S. Pat. Off.



What's the profit story for you in this picture?

Twenty and more years ago, coffee grinders like the one in the antique store window, were in use in many American kitchens.

Today, housewives buy the brand and grind they want—more than 500,000,000 pounds of coffee a year—roaster-fresh and vacuum-packed in cans!

Why?

Because American Can Company invented the vacuum can for coffee. This can introduced roaster-fresh coffee to millions who had never tasted coffee at its best.

Perhaps—through its vast facilities and wealth of packaging experience—Canco can show you how to make more money through better packaging.

AMERICAN CAN COMPANY

New York • Chicago • San Francisco



ALUMINUM FOIL WRAPPERS

by *Traver* ...



H A M

An attractive design, printed with transparent colored inks on Traver's sparkling Aluminum Foil wrappers, develops a selling punch which brings results in any retail outlet. Give your ham an eye-catching attire that will bring the shopper up short, reminding her that inside this shiny package is a tasty, tender shank of her favorite ham.



When special seasons require extra sales appeal against competing brands, put *your* ham in this glistening wrap and watch the buyers' pocketbooks pay homage to its charm.

Stock designs (Tulip and Lily) are available for immediate delivery.



...and with the beauty of Traver Aluminum Foil wrappers, you are assured protective strength by heavy paper backing.

These photographs show Traver Aluminum Foil wrappers in actual use.

☆ WRITE OR WIRE—For Full information



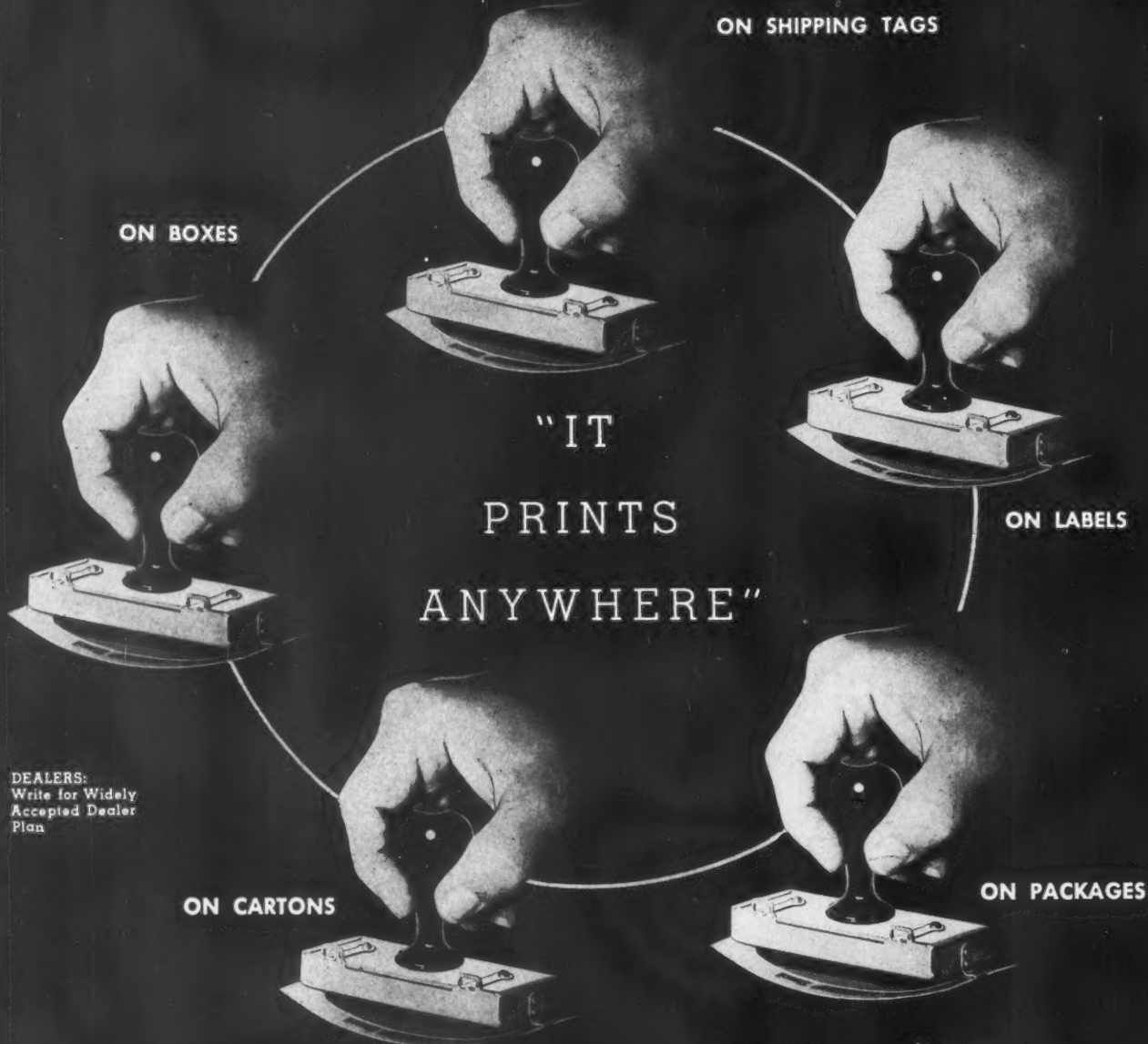
366 W. ONTARIO STREET

● CHICAGO 10, ILLINOIS

CONVERTERS AND PRINTERS OF FOIL, CELLOPHANE, PLASTICS, ACETATES AND GLASSINE

FEBRUARY 1948

43



DEALERS:
Write for Widely
Accepted Dealer
Plan

FAST, ECONOMICAL—IDEAL FOR MARKING,
ADDRESSING, DUPLICATING, SMALL PRINTING JOBS

Guarantees you accuracy in those duplicate addresses, code markings, signatures. The No. 1 MULTISTAMP stencil duplicator permits quick changes in wording . . . gives you "a rubberless stamp in one minute for two cents." Prints in places no other duplicator can reach . . . takes up to 5 lines of type 3 inches long. Makes 1000 or more clear copies from one stencil, one inking. Just type or write the stencil, snap it on, and print. Complete with supplies in compact, durable case. Weight: 2 pounds

Established 1921
Reg. U. S. Pat. Off.



MULTISTAMP

STENCIL DUPLICATOR

MANUFACTURED ONLY BY THE MULTISTAMP CO., INC. NORFOLK, VIRGINIA

No 1 RUBBER STAMP SIZE
\$7.50 COMPLETE
(non-mechanical)
OUTFIT
L. o. b. factory

Larger Outfits Also Available

**A better display
at lower cost**



Molded of

LUMARITH*

Molded by Arrow Plastics Corp., Passaic, N. J., for The Rieser Company, Inc., New York, N. Y.

The Venida Hair Net Display is typical of the large size moldings possible with Lumarith—a Celanese cellulose acetate plastic.

By molding this product in Lumarith transparent plastic, the manufacturer is able to reduce to a single molding what would ordinarily be a fabricating job requiring more than two dozen parts . . . producing a better article at a fraction of the cost of other methods and materials.

If you are producing a product that you think might be made better, faster or cheaper with Lumarith molding plastics, you are invited to get in touch with a Celanese representative. He will supply you with the information and facts you need to know. Write or call CELANESE CORPORATION OF AMERICA, Plastics Division—Dept. P1, 180 Madison Avenue, New York 16, N. Y.

*Reg. U. S. Pat. Off.

Celanese*
Plastics

- **ONE PIECE CONSTRUCTION**—for economy
- **TRANSPARENT**—for quick merchandise selection
- **TOUGHNESS**—for long counter life

LUMARITH* FORTICEL* CELLULOID* VIMLITE* CELCON*

BEE-LINE YOUR LABELING OPERATION

When your glass packaged product reaches the labeling point on the production line, you don't want any traffic jams, detours, or collisions.

Put it on the BEE-LINE and it comes straight through, all dressed up in clean, smooth, precisely and firmly applied labels. That's why the BEE-LINE Labeler—Model 65 for one-a-second output,

Model 120 for two-a-second, is considered the best in the WORLD by those who apply front or front and back labels to round, square, flat, oval or panel containers.

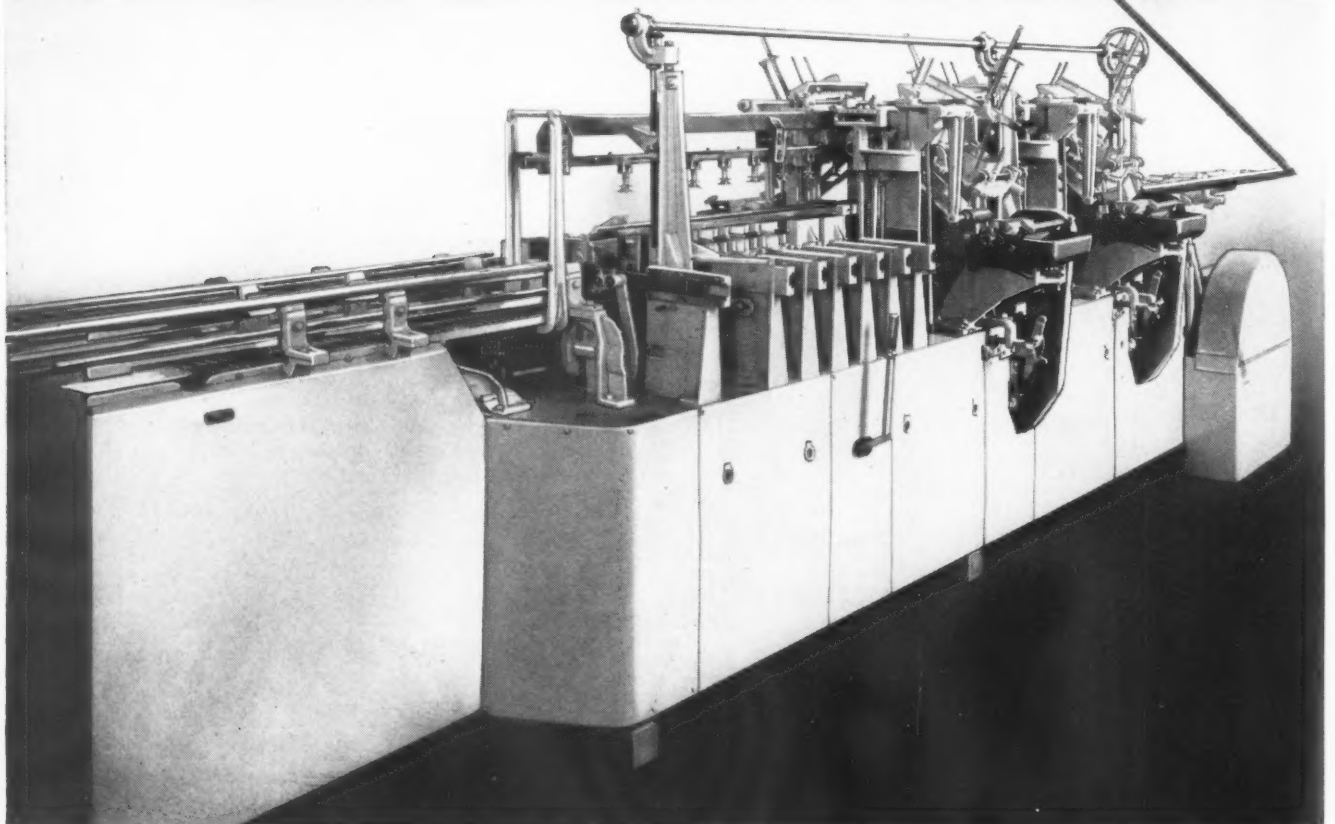
Send us samples of your labeled containers and we'll give you all the facts and figures on the best Labeler in the WORLD for you.

ECONOMIC MACHINERY COMPANY

Builders of World Automatic and Semi-Automatic Labelers for Every Purpose

WORCESTER, MASSACHUSETTS

New York Philadelphia Pittsburgh Chicago San Francisco Los Angeles Denver Louisville Salt Lake City
El Paso Seattle Portland Phoenix London Montreal Toronto Winnipeg Newfoundland Vancouver
Mexico City Sydney, Australia Wellington, N.Z. San Juan, P.R. Ciudad Trujillo, D.R. Honolulu, T.H.





Announcing Continental's New "Fingertip" Aerosol Container

Special features of the low-pressure "Fingertip" container

1. Low cost
2. Designed for high-speed automatic filling.
3. Easy, dependable action.
4. Light but sturdy.
5. Low shipping costs due to valve position under top of double seam.
6. Easy stacking for counter display.
7. Internal coatings to suit product.

Here's the most effective, practical and economical low-pressure aerosol container you've ever seen.

Designed like a flat-top beer can—it is called "Fingertip" because the key to its many advantages is its new, highly efficient fingertip valve.

Although the "Fingertip" container is light and low in cost, tests with insecticides show it delivers the same knock-down and killing properties as high-pressure aerosols.

See the panel at the left for its "7 features" and you'll understand why this new container is ideal for insecticides . . . how it can be readily used for many other products.

If interested, write our nearest Sales Office for a comprehensive booklet on low-pressure aerosols.

CONTINENTAL  CAN COMPANY

100 East 42nd Street

New York 17, N. Y.

for
HOUR after *HOUR*
 of continuous operation—
 the **SHUMANN BAG MACHINE**



Profit by our years of experience. Built, tested, and proved by a commercial bag manufacturer, the SHUMANN Bag Machine is practically fool-proof. It is fully automatic and ruggedly constructed for steady production. Operation is continuous—without lost time due to breakdowns.

The SHUMANN Bag Machine makes bags with the "Crimp Seal" bottom for absolute moisture-proof and sift-proof protection. Handles all types of heat sealing materials. Makes either single or duplex bags, flat or gusset type, in any size from 1½" x 1½" to 12" x 16".

For perfectly sealed bags, with printing perfectly registered, and with lowest unit cost, investigate the SHUMANN Bag Machine. We will gladly arrange a demonstration to prove to you its many advantages. Write today for full information.

SHUMANN
 EQUIPMENT COMPANY

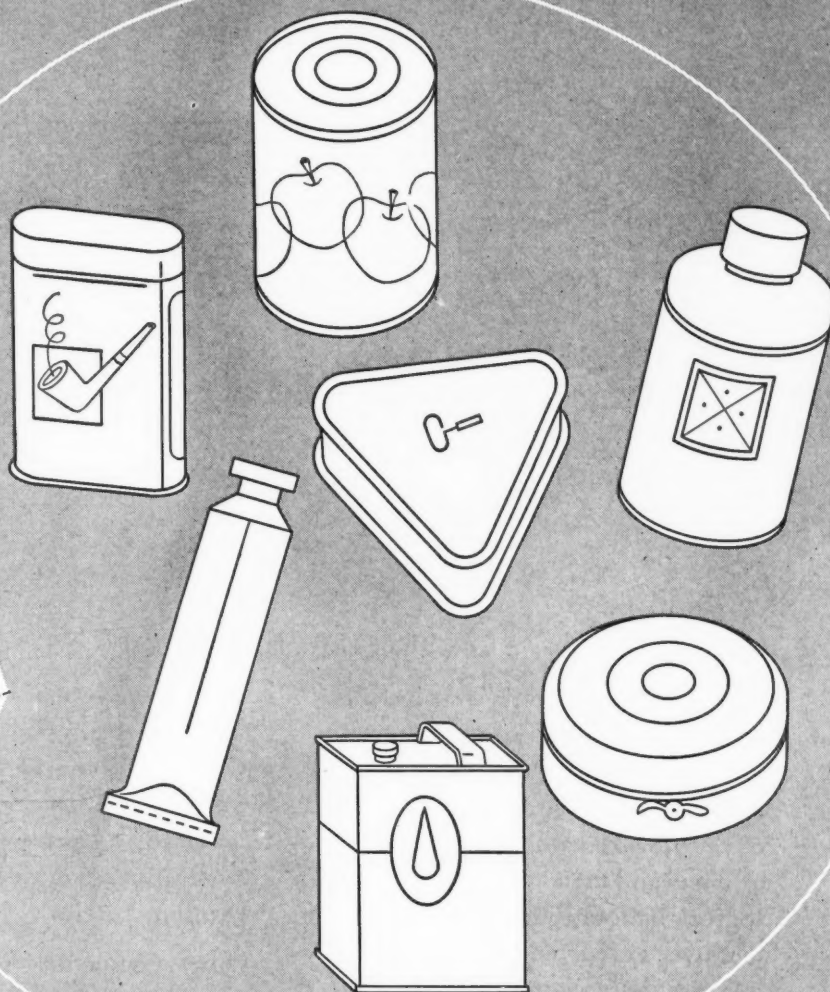
Everything in Packaging

1206 E. Carson Street

Pittsburgh 3, Pa.

The unseen label on the package is BLISS

Made
on
BLISS
container
machinery



Food can or collapsible tube...candy box or cosmetic package...tobacco tin or paint can—if all the infinite shapes and types of metal containers and caps were labeled to identify the machines on which they were produced, "Bliss-Built" would be an often recognized stamp of quality on the package.

And it would identify the world's largest independent manufacturer of can and container machinery...the pioneer of many of the engineering advances in our modern high speed and efficient packaging methods...for over 90 years.

Bliss' all-inclusive range of equipment parallels the wide variety of sizes, shapes and production volume requirements from the smallest tin to the largest drum. Your container-making needs are among them—for a single machine or a complete production line.

Tell us your container-making problem. Our engineers will be glad to help work it out. Include the information in the following check-list. It will help speed back our recommendation.

How to send us your INQUIRY

The more we know about your individual requirements, the better able we will be to help you meet them. The following information is requested: 1. Dimensioned drawings • 2. Hourly and yearly production required • 3. Intended contents of container • 4. Floor space • 5. Power characteristics • 6. Gas supply available where soldered cans involved.

BLISS produces machinery for making the following cans and containers:

Sanitary round cans...1-3M per day, 150 per min., 300 per min.; 5-gallon square...1-1½ M per day, 5-8M per day, 15-20M per day; Screw and crown caps; Square and oval cans (fish); Dry package containers; Flit cans; Paint cans; Milk cans; Butter cans; 5-gallon Kit line; Pails and Buckets; Special and irregular shapes; Drums and Barrels; Individual sheet metal working machines.

E. W. BLISS COMPANY

Container Machinery Division
Englewood, New Jersey

*We would like to help you find
new and profitable uses for*
AMERICAN ANODE *latices and mixes*



MANY seemingly impossible things have been done lately with American Anode latices and mixes. For example, high-altitude oxygen masks with intricate systems of ducts and metal inserts; meteorological balloons that are 5 feet in diameter uninflated, 28 feet inflated, that rise more than 20 miles into the air; amazingly complicated surgical catheters with 3 or more tubes, yet made in one piece.

American Anode latices and mixes are also used as coatings and impregnants for textiles and paper, and as adhesives in a wide variety of applications.

Most of these uses are the direct result of the work done by American

Anode development men in our completely equipped development and research laboratory—men with the experience needed to permit us to offer you a *complete* research, design, engineering and production consultant service.

Don't assume that a product can't be made—or a problem solved—with latex until you've consulted with American Anode development men.

Latices and compounded mixes of GEON, HYCAR, Saran, neoprene, crude rubber and GR-S are available. For more information about these modern materials—*and proper methods of using them*—please write Department AC-1, American Anode Inc., 60 Cherry St., Akron, Ohio.

AMERICAN ANODE
INCORPORATED

CRUDE AND AMERICAN RUBBER LATICES, WATER CEMENTS AND SUSPENSIONS

Orchid Box, Northmont Hosiery Corp., made of Monsanto's VuePak . . .
Tube, B. Altman & Co., made of Celanese Lumarith . . . Bag, Schwartz & Co., made of DuPont Cellophane . . .
Chinese Box, used for promoting Dancing Twins Hosiery, made of Eastman's Kodapak.

©1948, U.S.E. CO.

Sheer Magic

Witness the *buy-me* power Kellogg has cleverly worked into these packages for hosiery. One container suggests re-use as a cigarette case . . . another, an excellent traveling accessory . . . a third, a jewel or handkerchief box. The way they carry out their original intent of boosting sales is nothing short of magic.

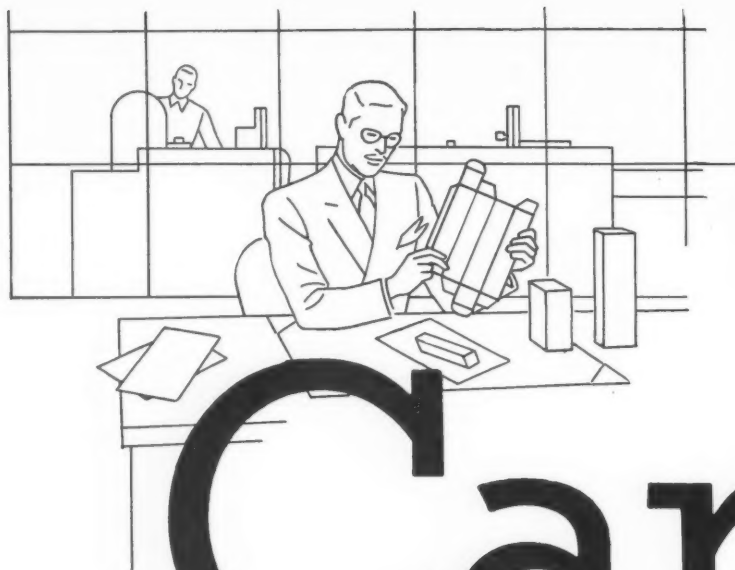
Whether your product will dress best in rigid acetate View-Pac containers or flexible E-Z-Pac cellophane bags, Kellogg has the how-to-do-it. Effective printing in multi-color design — versatile engineering facilities . . . can be combined to keep what you make in spotlight positions at all-important points of sale.

Kellogg is ready *now* to show you all that can be done in developing a finer package for your product. Get in touch with Kellogg today.

 P-81

KELLOGG CONTAINER DIVISION

UNITED STATES ENVELOPE COMPANY
 SPRINGFIELD 2, MASSACHUSETTS



to the Carton Maker

Making cartons that precisely fit each customer's bill, not just acceptably fill it, is an effective answer to tough competition. And it is often the major difference between now-and-then and steady-repeat orders. The material that enables you to offer such cartons is Ridgelo Clay Coated Boxboard... custom-made to exactly fit each size, thickness, color and finish specification. Your customer will get cleaner, brighter, more attractive and serviceable cartons per dollar. You will get easier, faster, more profitable production per order.



MADE AT RIDGEFIELD, N. J.
BY LOWE PAPER COMPANY

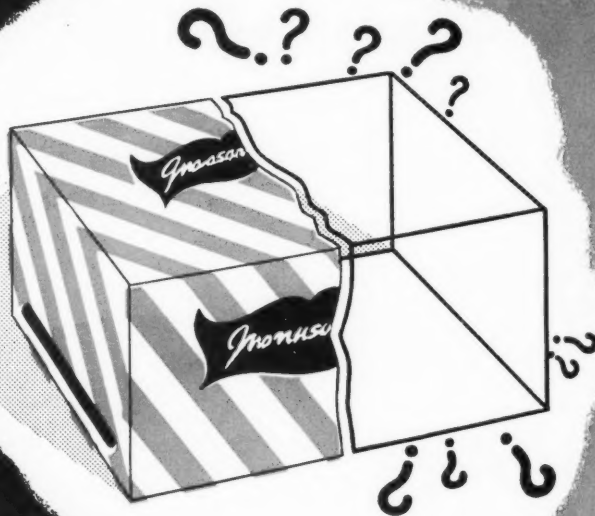


**custom-made FOR THE INDIVIDUAL PROCESS, INKS, DESIGNS, COLORS AND FINISH.*

REPRESENTATIVES:

H. B. Royce, Detroit • Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Sons, Inc., Philadelphia

HOW ABOUT THE OTHER HALF?



Merchandise Properly Displayed Is Half Sold

Yes, it's true that a beautiful package influences sales but it won't maintain consumer satisfaction if the contents have deteriorated.

There's no need to sacrifice either design or protective ability when you use ALUMINUM FOIL, because the natural brilliance of foil lends itself to a myriad of dazzling designs and the delicacy of your product is protected by foil's impervious metal jacket against moisture and odor transmission as well as harmful light rays.

As Foil Rollers, we serve practically all converters and are also fully conversant with the many producers of finished foil packaging. Therefore, if you have a packaging problem we would welcome the opportunity of recommending the leading package concerns best qualified to do your job. We invite your inquiries, no obligation is entailed.

cofco
ALUMINUM FOIL

BEAUTY • PROTECTION
DISTINCTION
BRILLIANCE • ECONOMY



COCHRAN FOIL COMPANY, INC., LOUISVILLE 10, KENTUCKY

Sales Offices

600 - 15th Ave., South
Minneapolis 4, Minn.

Gothic Suite • 527 Lexington Ave.
New York 17, New York

238 West Wisconsin Ave.
Milwaukee 3, Wisconsin

2032 East 22nd St.
Cleveland 15, Ohio

"You've never tasted Cremo?"



"It's Swell! *We have it often at our house on all kinds of desserts, and sometimes Mother uses it on cakes . . . it makes the best frosting."*



Yes, busy mothers find countless ways to use this smooth, creamy marshmallow. It adds tempting variety to menus, with special appeal to youngsters.

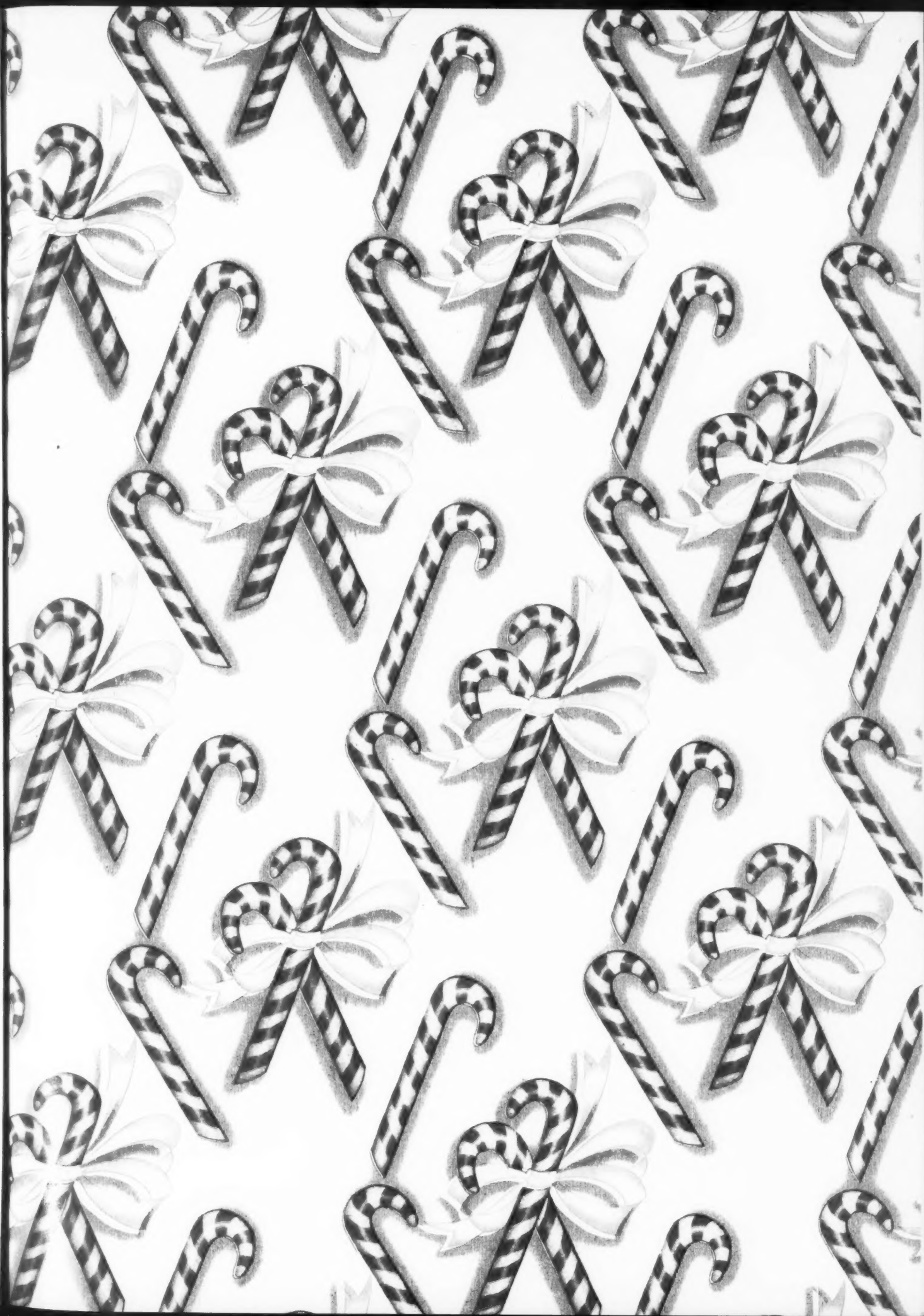
The Crown Screw Caps used as closures on this product are attractively lithographed in three colors to harmonize with the distinctive Cremo label design. Extended to include the full depth of the skirt, this decoration definitely enhances the sales appeal of the package.

But these caps have more than beauty. They have the uniformity that assures trouble-free application on production lines. They have liners that are carefully

selected to give maximum protection to specific products. And, of course, they have the exclusive Crown Deep Hook Thread construction. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's Largest Makers of Metal Closures.*

Cremo is a product of The Cremo Manufacturing Co., Philadelphia, Pa.

CROWN CLOSURES



It's PEPPERMINT STICK

Write for
SAMPLES and
PRICES

KUPFER BROS. CO.

4 ASTOR PLACE, NEW YORK 3, N. Y.

THIS gay, exciting pattern is available on flint and metallic finished paper in a wide range of smart modern color combinations.

You can get immediate delivery in quantity now. Moreover, we've made special inventory and printing arrangements so that, at most, only minor delays will occur during re-runs of particular color combinations.

Manufacturers of Surface Coated Papers Since 1845

KUPFER BROS. PAPER CO.
145 West Hubbard Street
Chicago 10
Illinois

Southwest Representatives
MODERN PACKAGINGS
1214 S. Akard St.
Dallas 1, Texas

EDWARD M. MARKS CO.
8334 West Third Street
Los Angeles 36
California

GRAHAM-JONES PAPER CO.
730 North Myrtle Ave.
Jacksonville 4, Fla.

Branches in: BOSTON • PHILADELPHIA • SEATTLE

WILDROOT Cream-Oil wins "untouched market"

with **WIRZ** tubes...

easy to use — handy for travel —
no waste — no spilling ...

ONCE again the convenience of WIRZ Collapsible Metal Tubes opens the way to a new market for an old favorite.

As WILDROOT sales indicate, American men have signified their approval of the smart, new, convenient WILDROOT Cream-Oil Hair Tonic in tubes. And no wonder, it is easy to handle, ideal for travel. No waste, no spilling. Congratulations to WILDROOT on its wise planning!

Are you searching for an "untouched market" or increased sales in your present markets for your creams, pastes, powders, or liquids? Perhaps the greater convenience, protection and appeal of WIRZ Collapsible Metal Tubes and Plastic Caps are the answer. Let's explore their profit potentials together. Write today.



Fourth & Cole Sts. • CHESTER, PA.

New York 17, N. Y.
50 E. 42nd St.

Chicago 4, Ill.
80 E. Jackson Blvd.

Memphis 2, Tenn.
Wurzburg Bros.

Havana, Cuba A. G. Spilker—Los Angeles 14, 1709 W. 8th St.
Roberto Ortiz Planos Exposition 0178—Also Danville, Calif.

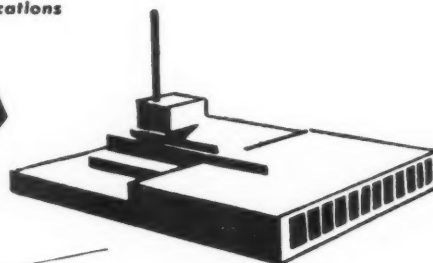
Export Division
755 Drexel Bldg., Philadelphia 6, Pa.

Collapsible Metal Tubes • Lacquer Linings • Wax Linings • Westite Closures • Soft Metal Tubing • Household Can Spouts • Applicator Pipes • Compression Molding

YOUR RELIABLE NEW SOURCE FOR Custom LAMINATED and COATED Papers



*Send Your Stock For Laminating
and Coating to your specifications*



*Or Order Trojan Laminated and
Coated Papers From Extensive Inventory*

Trojan

• Foil laminated to paper, board or cloth • Pliofilm, cellophane and other protective laminations • Special heat seal, greaseproof, protective coatings • Foil Label Papers and foil mounted materials for the graphic arts industry

Here's a new, reliable **two-way** source for you. Now you can send your foil, paper or protective materials for fast, efficient custom laminating or coating. **Or** you can



order high quality, finished Trojan Foil, or Trojan Laminated and Coated products for your

®

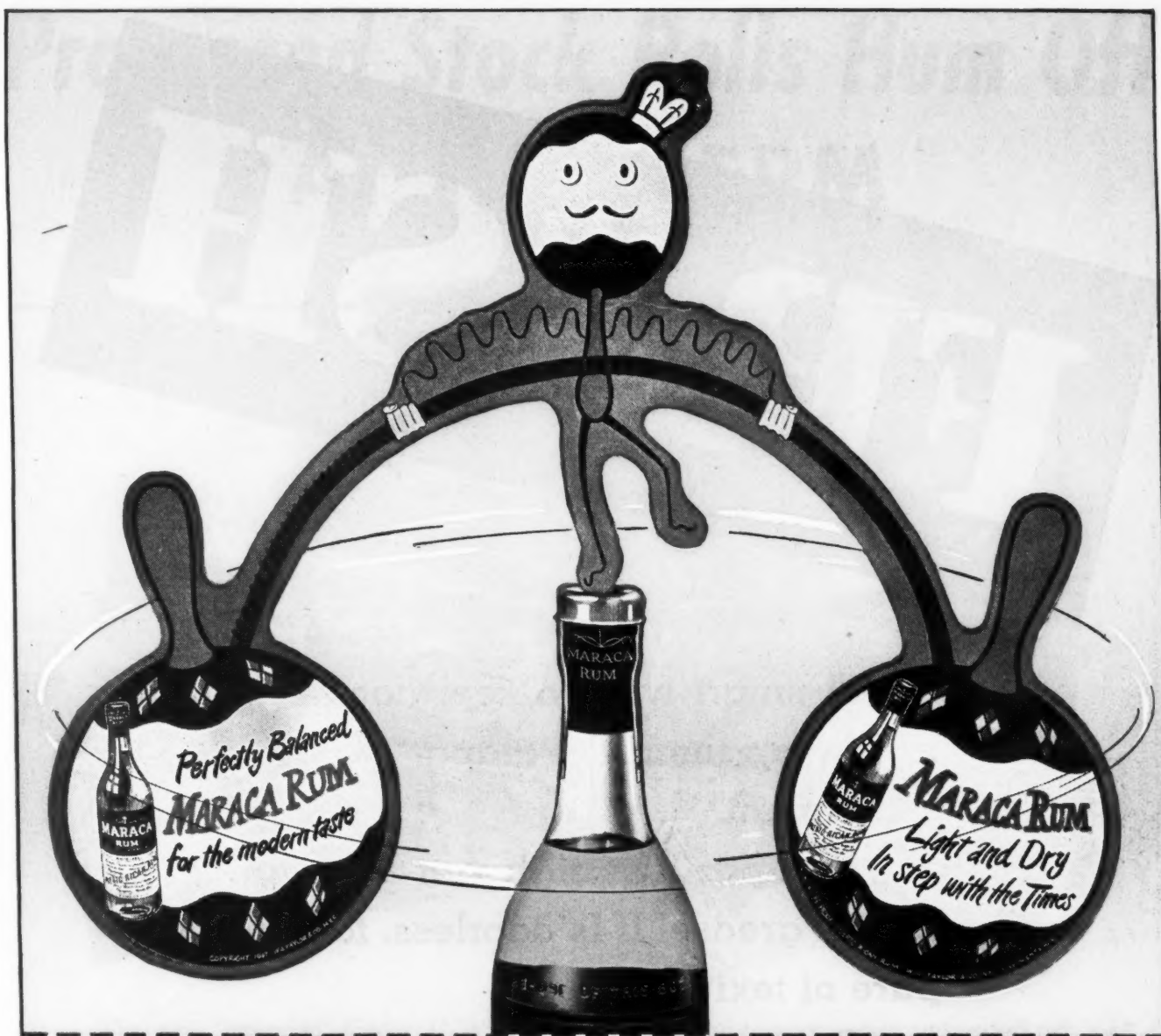
specific needs. You get best results, either way.

Modern equipment, active research and testing programs, plus years of specialized experience assure highest quality standards. For more facts on this new custom service, and samples of Trojan Laminated and Coated Products, write or wire Department 292 today.

THE GUMMED PRODUCTS COMPANY

OFFICES • TROY, OHIO • MILLS

Chicago • Cincinnati • Cleveland • Los Angeles • New York • Philadelphia • St. Louis



The moving spirit...

There are more brands of rum than Republicans in Congress. (No connection, however.)
Brand recognition, even in the trade, is harder to get than kind words from Molotov...
Most distillers are *mañana* about the situation. One came to E-F... See above.

Joe Maraca spins merrily on the indented top of a bottle without visible means of motivation (if the electric fan is out of sight, as it should be), and with visible mystification to the customers. They watch, wonder, comment, ask questions. After they know how it works, they tell others. And Maraca is one rum they remember!...
All from free air, and an E-F idea... For promotion that gets audience participation, page Einson-Freeman... any office, any time.



Einson-Freeman Co. Inc.... Sales spirited lithographers

STARR & BORDEN AVENUES • LONG ISLAND CITY, N. Y.

Offices in Chicago, Cleveland, Cincinnati, St. Louis, Minneapolis, Atlanta, Dallas, Los Angeles, San Francisco

FRESH

A smart way to keep foods fresh is to wrap them in Patapar* Vegetable Parchment.

Patapar has high wet-strength. It resists grease. It is odorless, tasteless, pure of texture.

Patapar wrappers are furnished plain or printed with brand names and colorful designs.

*Reg. U. S. Pat. Off.



The Patapar Keymark nationally advertised symbol of wrapper protection.

Wrapped in Patapar foods keep fresher

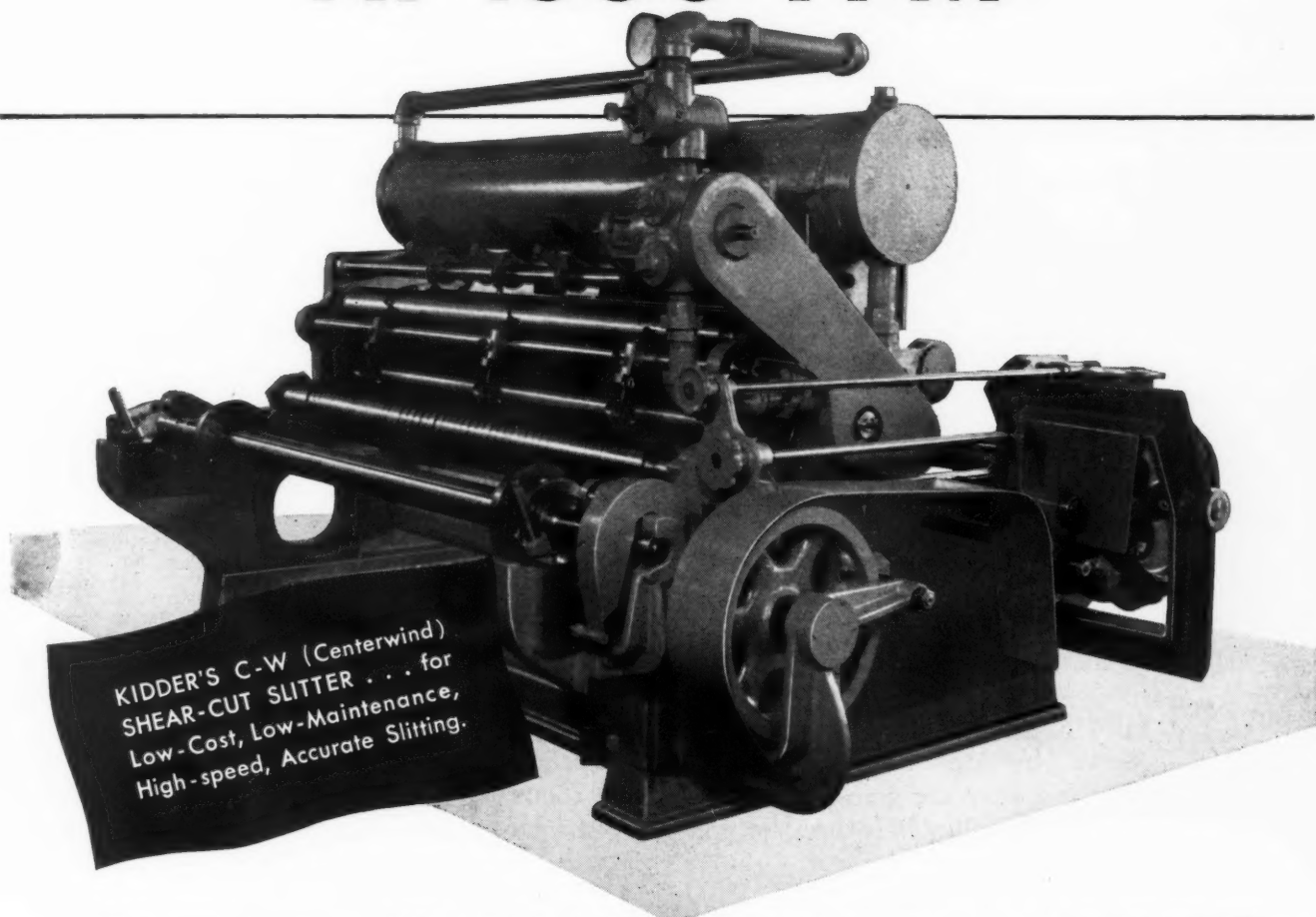
Paterson Parchment Paper Company • Bristol, Pennsylvania

Headquarters for Vegetable Parchment Since 1885

WEST COAST PLANT: 340 BRYANT STREET, SAN FRANCISCO 7, CALIFORNIA

BRANCH OFFICES: 120 BROADWAY, NEW YORK 5, N. Y. • 111 WEST WASHINGTON ST., CHICAGO 2, ILL.

Processed Stock Rolls Hum Off AT 1500 FPM



The new, improved Kidder C-W Model Slitter delivers accurately-cut, dustfree rolls of processed stock in widths 2" or more at 1500 fpm. Rolls are never burred or interwoven . . . they fall apart by themselves. The centerwind principle, without rewind drums, allows slitting of most types of papers from light tissues to heavy-coated tag stocks.

Automatic Carriage — a Kidder exclusive — in which the carriage moves backward as the rewind roll grows bigger, assures constant, min-

imum lead between cutters and rewind roll. No chance for interweaving rolls.

Automatic Hydraulic Tension Control — prevents interweaving. Kidder engineers have applied this principle to the C-W model to assure constant web tension. Simply set the desired tension on the dial and it is automatically maintained throughout the run.

Scissors-Action — Shear-type cutters, self-sharpening for low maintenance, cut the web cleanly.

KIDDER PRESS COMPANY, INC.
DOVER, NEW HAMPSHIRE

A. E. MARCONETTI
11 W. 42nd St., New York 18, New York

MACHINERY SERVICE CO.
P.O. Box 33, Los Angeles 11, California



Preview of '48



THEY'RE in trouble! You need no crystal ball or social-service survey to see the picture. Mr. & Mrs. Jones have got to make that paycheck go further—they're in a genuine squeeze play and they are going to do something about it. They are going to "shop"—cautiously and carefully. Whether you get your share of their dollar depends on you—and you *can* do something about it.

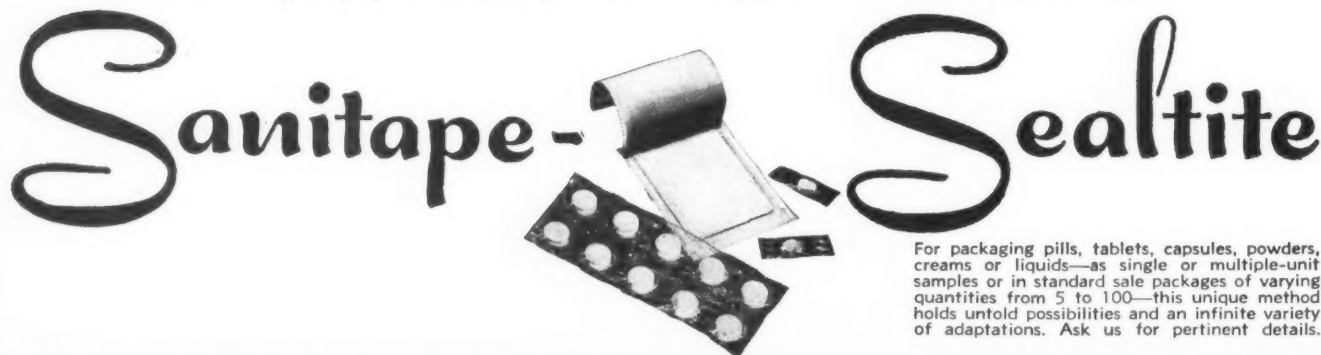
MEET THE CHALLENGE AGGRESSIVELY

Generous sampling proves and demonstrates what thousands of words cannot. The *Sanitape-Sealtite* Sample, with its completeness, attractiveness, protectiveness, and convenience is without an equal.

New package design can give your product an entirely new appeal—lift it out of time-worn, competitive situations—facilitate new and unsuspected uses—and if unit-packaging be selected, you will

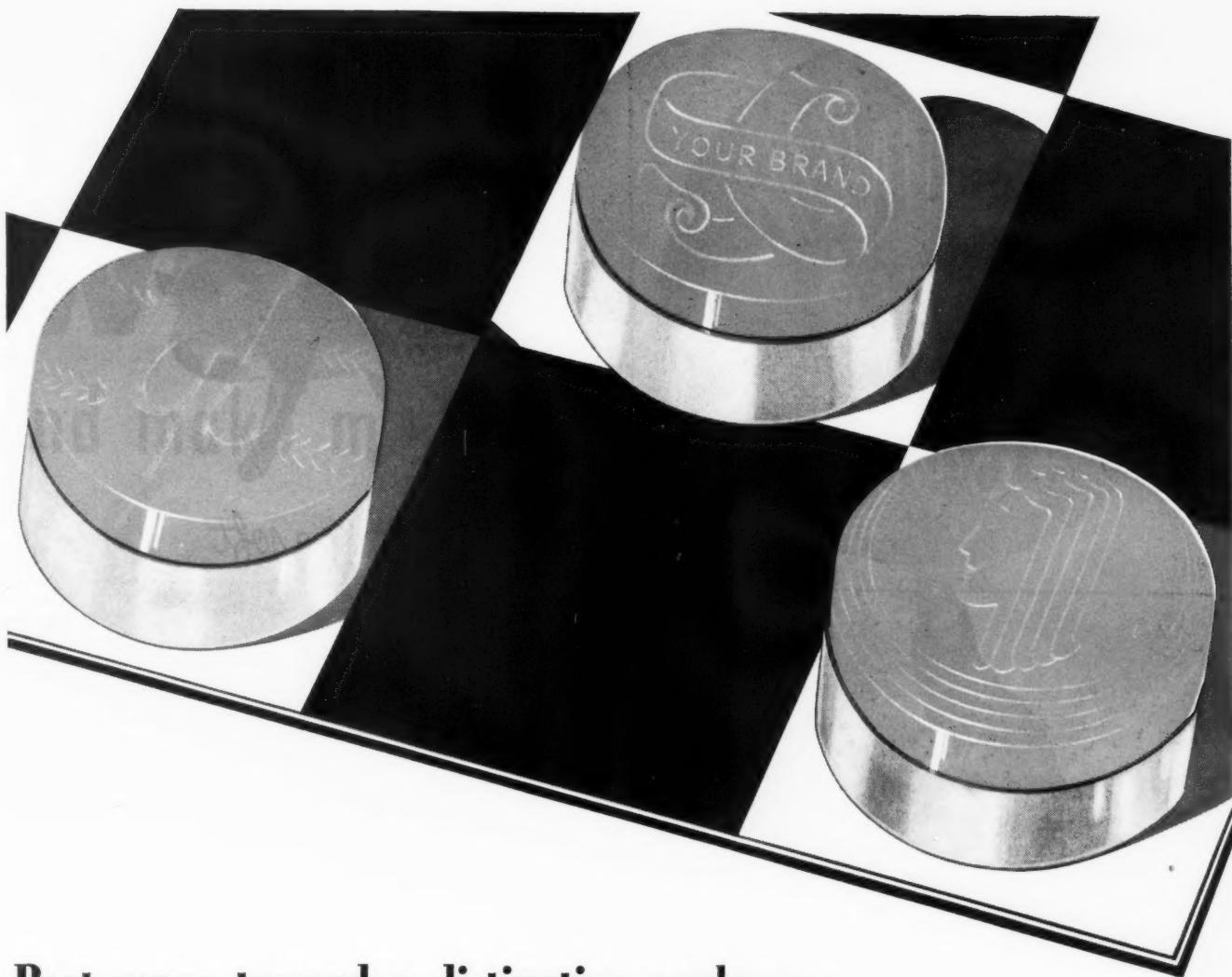
have the satisfying economies available through *Sanitape-Sealtite* and our Contract Packaging Division.

Smart merchandising can help you to your rightful share of the hard-pressed pay envelope. Attractive, convenient packaging and arresting card and counter displays, to which unit packaging is ideally suited, are yours with the *Sanitape-Sealtite* Method.



For packaging pills, tablets, capsules, powders, creams or liquids—as single or multiple-unit samples or in standard sale packages of varying quantities from 5 to 100—this unique method holds untold possibilities and an infinite variety of adaptations. Ask us for pertinent details.

IVERS - LEE COMPANY • 215 CENTRAL AVE • NEWARK • N. J.



Best move toward a distinctive package— a Private Design Cap

You can give your package a distinctive appearance by crowning it with a custom-made Armstrong's Artmold Cap. These three designs may suggest ideas to you that will emphasize the exclusive character of your product. With your individual design, you can give your package sales-stimulating individuality which can be gained in no other way. By adding a sparkling color, extra

beauty can be gained at small additional cost. For design and color suggestions and cost estimates, including mold costs, send a sample or drawing of your package to Armstrong Cork Company, Glass and Closure Division, 5902 Prince Street, Lancaster, Pennsylvania., or West Coast representatives, I. F. Schnier Company, Inc., San Francisco and Los Angeles.



ARMSTRONG'S *Artmold* **CAPS**
PLASTIC

ALUMINUM TUBES *by Sun Tube*



From Designing
to Capping —
From Testing to
Engineering —
IT'S SUN TUBE

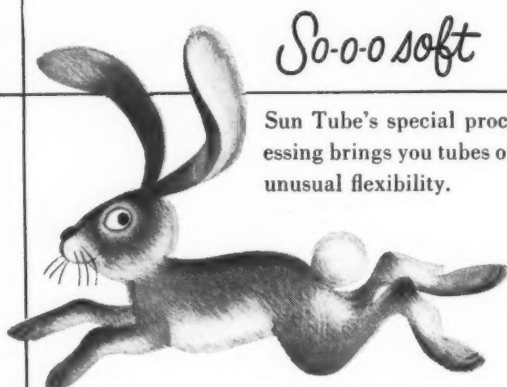


So-o-o dependable

Engineered with the crisp
uniformity that distinguishes
all Sun Tubes.



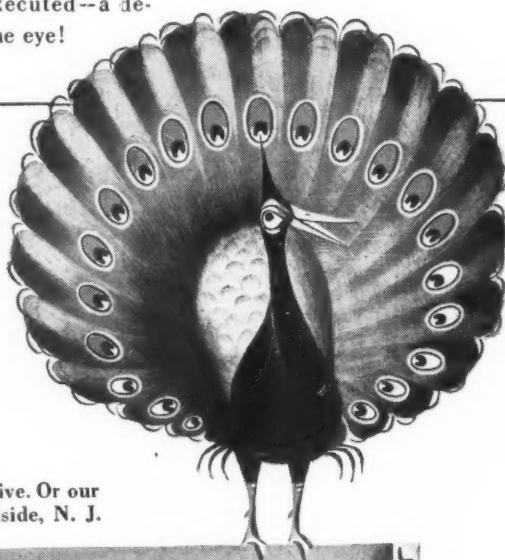
No lint — no shavings — as
clean as your own product.



Sun Tube's special proc-
essing brings you tubes of
unusual flexibility.

So-uch brilliant design

Vividly colored, beau-
tifully executed—a de-
light to the eye!



Phone or write our nearest representative. Or our
main office at 181 Long Avenue, Hillside, N. J.

CHICAGO 3, ILL., James L. Coffield, Jr., 105 West Adams St.
LOS ANGELES 27, CALIF., R. G. F. Byington,
1260 North Western Ave.
ST. LOUIS 1, MO., M. P. Yates, Arcade Bldg.
ST. PAUL 1, MINN., Alexander Seymour, 615 Pioneer Bldg.
CINCINNATI 8, OHIO, Ralph H. Auch, 3449 Custer Road



Learn About WOMEN

and make more

\$SALES!

Three quarters of the consumer goods market is—*women*.

They *buy* $\frac{3}{4}$ of all goods sold at retail.

They make $\frac{3}{4}$ of their decisions as to *what brand* to buy (surveys show) at the point-of-sale—in the stores—*on impulse*.

There—where they react to what they SEE—the *appearance of your product's package* becomes a *decisive* sales factor. The *better looking* packages attract women—*sell* them.

HOW TO MAKE YOUR PACKAGE SELL!

Let Ritchie help you develop (at low unit cost) a package that meets the increasing challenge of self-service retailing. A practical, production-planned package that instantly identifies, fully protects and conveniently dispenses your product. Easy to fill or pack—to handle—to stack or display. An attractive, eye-stopping, **SELLING** package.



MARGUERITE CHAPMAN,
starring in **RELENTLESS,**
a **COLUMBIA Technicolor**
Production

AS THE MOTION PICTURE INDUSTRY capitalizes on *good looks*, keen merchandisers capitalize on the selling power of an *attractive* package.



Never
the Power

W.C. *Ritchie*
and COMPANY
8840 Baltimore Avenue • Chicago 17
★ SET-UP PAPER BOXES
★ FIBRE CANS
★ TRANSPARENT PACKAGES

TRADE MARK

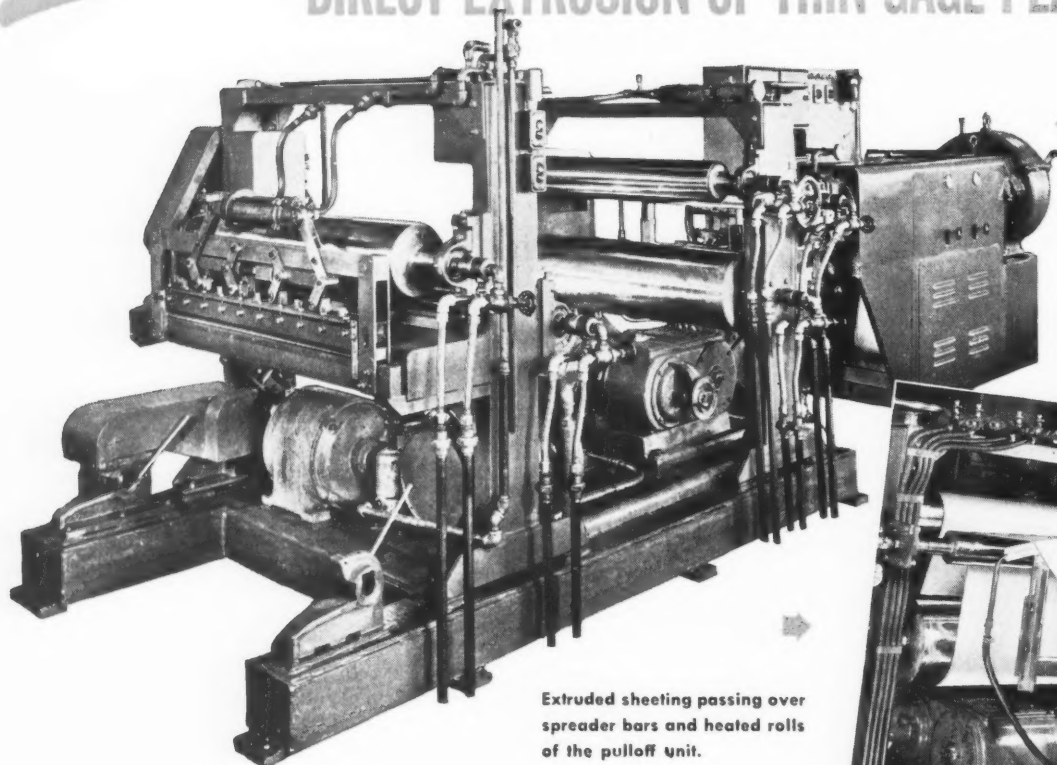
Underestimate
of the Package!

NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • CHARLOTTE • JACKSONVILLE • ERIE

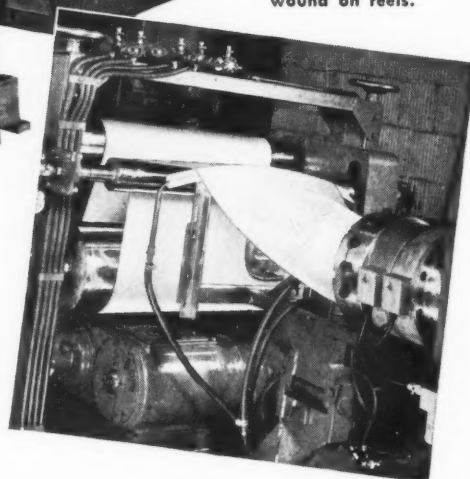
NOW!

for packaging...

DIRECT EXTRUSION OF THIN-GAGE PLASTIC SHEET



Complete NRM Direct-Process Sheeting Unit; including 3½" extruder, special sheeting head, with cooling and pulloff unit equipped with automatic cutoff and continuous windup. Finished product can be cut into sheets or wound on reels.



Extruded sheeting passing over spreader bars and heated rolls of the pulloff unit.

Costs Slashed, New Markets Created by NRM Direct-Process Extruder and Pulloff Equipment

NOW, for the first time, an equipment manufacturer is able to offer the packaging industry a complete, full scale production unit for the direct extrusion of acetate and other types of thin-gage plastics sheet.

Here's what that means:

1. Production costs are drastically cut . . . as much as one half; unit will produce up to 150 lbs. of finished sheet per hour;
2. New markets, new products, and new uses for established products are made possible;

3. Thin-gage sheet output is greatly increased per dollar of capital investment, or:

4. Substantially less investment is needed for a given output of product;

5. Produces directly extruded material up to 22 inch trimmed width, 8 to 45-thousandths thickness. (Larger head for 36 inch wide sheet can be made available.)

The NRM Direct-Process sheeting unit is rugged, compact, requires a minimum of floor space. It consists of a 3½" NRM extruder

and special sheeting head, plus a cooling and pulloff unit with automatic cutoff and continuous windup for 36 inch untrimmed sheets. It is built by National Rubber Machinery Company, America's foremost designer and manufacturer of plastics extruders and extrusion equipment.

If you've been waiting for a practical, low-cost method of thin-gage sheet production, here's your answer.

For full information, including photographs, specifications and floor layouts write us today.

NATIONAL RUBBER MACHINERY CO.

General Offices: AKRON 8, OHIO

California Representative: Sam Klipp, P. O. Box 441, Pasadena 18, Calif.

Plastics

MACHINERY DIVISION

EXPORT DISTRIBUTORS: OMNI PRODUCTS CORPORATION, 460 FOURTH AVE., NEW YORK 16, N. Y.

SHONTEx HAIR and SCALP CONDITIONING FORMULA

SHONTEx HAIR and SCALP CONDITIONING FORMULA

2 Shontex SHAMPOO

The entirely new 1-44 Shontex that promotes Hair Beauty through Hair Health Leaves Hair with Natural Body and Texture

MAKE YOUR SAMPLING CAMPAIGN MORE EFFECTIVE!

Judicious sampling has long been one of the most successful of all methods to introduce a good new product. One of the most *effective and practical* of all containers to carry your product *and booklet or other sales message* is a New England "Sheffield Process" Collapsible Tube and Carton!

Aggressive distributors of fine products invariably choose the *tougher* "Sheffield Process" Tube and Carton for sampling campaigns. For, here, it is more than ever imperative that the product reach the user clean, fresh, easy-to-use... *together with a persuasive sales message that can't be overlooked!*

Highly trained New England field men will gladly council with you on sampling campaign plans or your regular requirements for better, stronger, *more attractive* Collapsible Tubes and Tube Cartons. Your phone call or letter to our nearest sales office will quickly bring you the kind of service and cooperation you want.



NEW ENGLAND COLLAPSIBLE TUBE CO.

3132 S. CANAL ST., CHICAGO 16 • NEW LONDON, CONN. • W. K. SHEFFIELD, V. P., 500 FIFTH AVE., NEW YORK 18
T. C. SHEFFIELD, 7024 MELROSE AVE., LOS ANGELES 38 • C. W. MILLER, 151 COLE ST., SAN FRANCISCO 17
EXPORT DEPT: 500 FIFTH AVE., NEW YORK 18; CABLE "DENTIFRICE", NEW YORK

Robert Gair

About April 1, 1948, our new
come into production at Port
modern Mill will supply the
fabrication into Corrugated
Nine Gair Box Plants located



FOLDING CARTONS • SHIPPING

Announcement!

Kraft Liner Board Mill will
Wentworth, Ga. This high speed
tonnage of Liner Board for
Shipping Containers by the
at

N. TONAWANDA, N.Y.

PORTLAND, CONN.

SYRACUSE, N.Y.

CAMBRIDGE, MASS.

UTICA, N.Y.

HOLYOKE, MASS.

NEW LONDON, CONN.

CLEVELAND, O.

PHILADELPHIA, PA.

ROBERT GAIR COMPANY, INC.

NEW YORK

•

•

TORONTO

CONTAINERS • PAPERBOARD

3 more packaging problems **SOLVED** with *Riegel's* SPECIAL **NON-TRANSPARENT** *Diafane*



**A FUNCTIONAL PACKAGING
MATERIAL THAT'S ATTRACTIVE
AND ECONOMICAL**

Here are three more of the strictly functional uses for Riegel's Non-Transparent Diafane . . . available either printed or plain in many standard grades . . . or tailor-made to your specifications.

- A. SOUP MIX**
Wax laminated foil and Diafane, Aniline printed by Cello-Masters, Inc. Packaged by Trans-Pac Services, Inc. on a Transwrap machine (Fin-Type).
- B. BAND-AID Adhesive Bandages**
Special heat-seal Opaque Diafane. Completely sealed. Printed by Riegel.
- C. VASELINE**
Heat-seal Pouch Diafane, Opaque, Gravure printed by Dobeckmun. Packaged on an Ivers-Lee machine.

Riegel
PAPER CORPORATION
342 MADISON AVENUE • NEW YORK 17, N. Y.

HIGHER QUALITY... LOWER COST

in Dobeckmun "Standard Size" Cellophane Bags

Compare your present bags with the advantages offered by the new, exclusive, Dobeckmun "Standard Size" program.

1. Dimension and capacity requirements closely matched by eight basic shapes and variable lengths to produce single wall, square bags in 260 different sizes.
2. Positive safety for contents, in moisture-proof cellophane, with reliable, glued seams and bottoms.
3. Smashing sales appeal, with surface printing in one, two or three colors. Saves label cost and labor. Or unprinted, if you prefer.
4. Easy opening lip for better seal and faster opening.
5. Contract deliveries matched to your production schedules.
6. Cost savings up to 15% or more.

ASK FOR SAMPLES and make your own comparisons. Or, send us specimens of your present bags and we'll supply detailed cost and quality analysis. The Dobeckmun Company, Cleveland 1, Ohio; West Coast Division, Berkeley 2, California.



CREATORS OF "PACKAGE IMPACT"

Continued service is available on special bags, printed or plain, and on our regular lines of satchel or Standrite bags. For exceptional sales impact in film or foil packages, or where you have a problem of product protection, consult our creative service department.

DOBECKMUN

Self-selling packages in processed films and foils

Branches: Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, San Francisco and Seattle. Representatives everywhere.

WHEN LABELS ARE ALIVE EXTRA SALES THRIVE

Behind sales-stimulating Rossotti Cartons and Labels is much more than meets the eye. Every package entering the House of Rossotti for production receives the benefits of these *six plus values* that only Rossotti can offer.

1. The Rossotti Marketing Research and Copy Planning Board.
2. The Rossotti Prize-winning Package Design staff.
3. Expert Art and Direct Color Photographic Service.
4. "Live-color" reproduction by master craftsmen and modern equipment.
5. The price advantages of "combination-runs."
6. The assurance of quality and satisfaction that only 50 years of experience can offer.

Expert results depend upon expert treatment. Rossotti, an organization of packaging experts since 1898, is at your service. For golden sales opportunities in '48, consult your local Rossotti representative during this, our Golden Anniversary Year.



50 YEARS
OF SERVICE

1898
Rossotti
GOLDEN
ANNIVERSARY
1948

Rossotti
SINCE 1898

ROSSOTTI LITHOGRAPHING CORPORATION • NORTH BERGEN, NEW JERSEY
ROSSOTTI WEST COAST LITHOGRAPHING CORP. • 5700 THIRD ST., SAN FRANCISCO 24, CAL.
SALES OFFICES: PHILADELPHIA • BOSTON • ROCHESTER • JACKSONVILLE • CHICAGO



BLUE... stops the eye... starts the sale

PACK TO ATTRACT IN
Maryland Blue

"Stop Shoppers"... see other side ...

Stop shoppers

WITH RICH, ROYAL MARYLAND BLUE

MAKE your product stand out from the crowd... give it the appearance of quality... and you improve its opportunity for success in highly competitive markets. Many famous products are seen, recognized and bought more frequently because they are packed in rich, royal, "eye-stopping" Maryland Blue Glass. Here's why:

BLUE makes your product easier to see.

BLUE makes your product easier to remember.

BLUE makes your product smartly modern.

BLUE insures rich, distinctive appearance.

BLUE stands out, assures better display.

BLUE advertises your product in the home.

BLUE builds profits, steps up repeat sales.

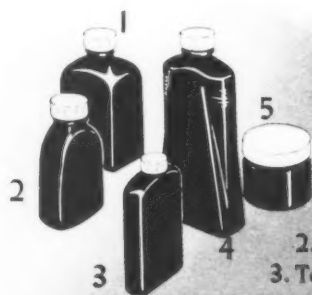


Write today... tell us the nature of your product and the sizes in which it is packed... and let us send you samples of appropriate stock designs. Or, if you use bottles or jars in large quantities, we'll be glad to create a special design for your exclusive use.

MARYLAND GLASS CORP.
BALTIMORE 30, MD.

PACK TO ATTRACT IN

Maryland Blue



Pictured on the preceding page

are just a few of the handsome stock designs.

This diagram makes them easy to identify.

1. Cabinet Square in $\frac{1}{2}$ oz. to 32 oz. sizes

2. Maryland Oval in $1\frac{1}{4}$ dram to 32 oz. sizes

3. Toilet Oval in $\frac{1}{4}$ oz. to 8 oz. sizes

4. Chesapeake Oval in 4 oz. to 32 oz. sizes



5. Squat Jar in $2\frac{5}{16}$ dram to 18 oz. sizes

ALSO AVAILABLE IN CLEAR GLASS

IS YOUR PRODUCT LISTED HERE?

(or if it is even remotely related)



 ELECTRIC RANGES	 GAS RANGES
 DEEPFREEZE UNITS	 REFRIGERATORS
 WATER HEATERS	 OFFICE DESKS
 STEEL FILING CABINETS	 BROOMS
 WALLBOARD	 MATTRESSES

Bemis' sturdy kraft paper covers get these and many other products to market with easy handling, low shipping charges, and ample protection.

Bemis covers are slipped over the product in a jiffy to seal out dust and dirt. With this scuff-resistant cover, the product can be stored for months and be ready to go onto the display floor sparkling fresh at any time.

You can probably save substantial sums on shipping charges alone by talking with the Bemis Paper Bag Specialty Man.

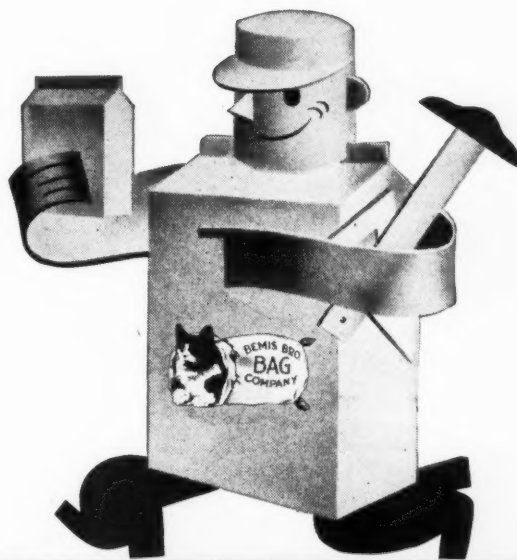
BEMIS BRO. BAG CO.



PAPER BAG SPECIALTY DIVISION • 1054 South Vandeventer, St. Louis, Mo.

FEBRUARY 1948

Then...see how BEMIS
can serve you with
Good Packaging
at Low Cost



FILL OUT AND MAIL THIS COUPON TODAY

BEMIS BRO. BAG CO., Paper Bag Specialty Div.
1054 South Vandeventer, St. Louis, Mo.

How can Bemis help cut packaging costs for our products? We manufacture _____

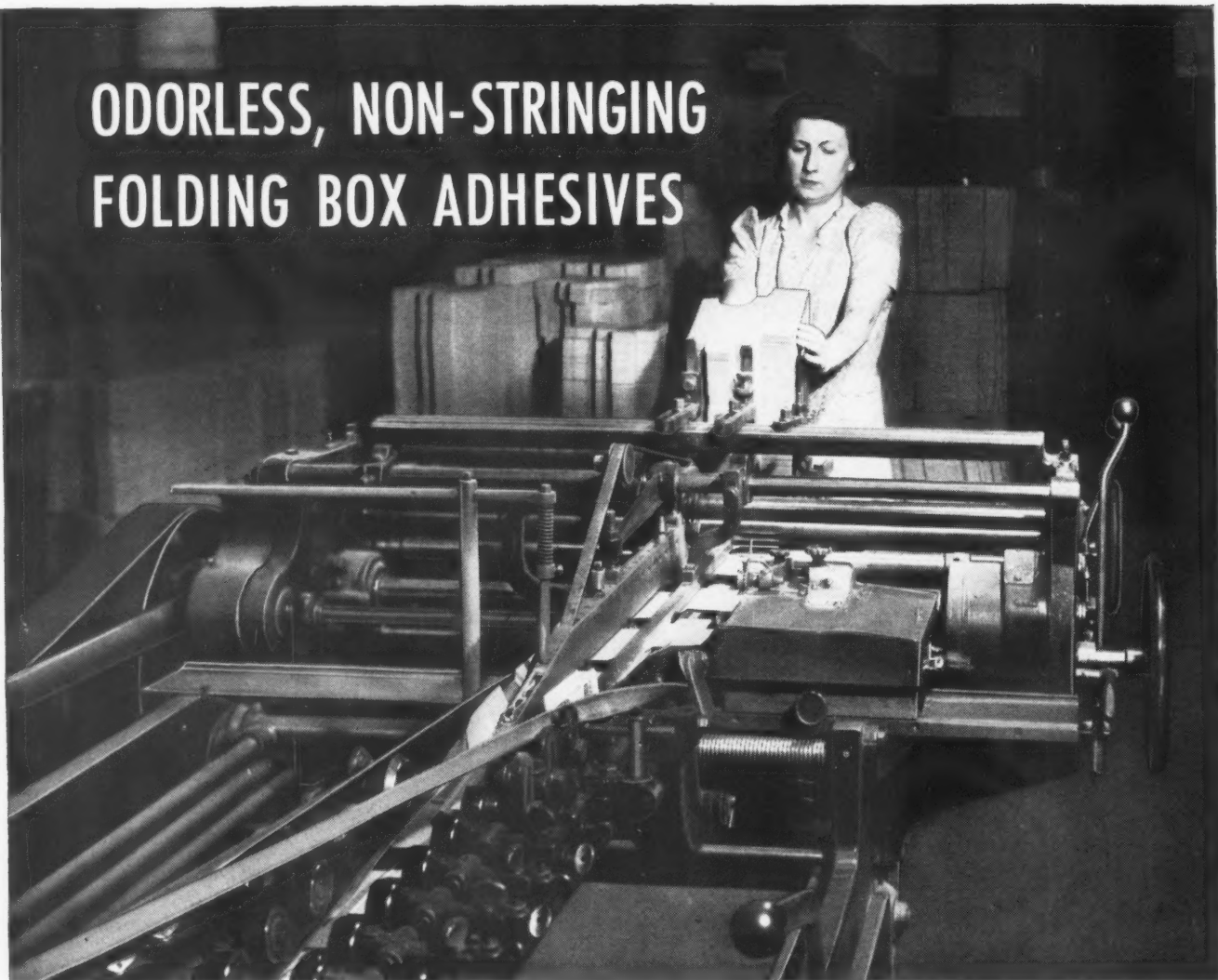
Name _____

Firm Name _____

Street _____

City _____ State _____

ODORLESS, NON-STRINGING FOLDING BOX ADHESIVES



FOLDING box manufacturers can depend upon **PAISLEY FOLDING BOX ADHESIVES** to give perfect performance in all fast automatic folding box machines. Correct, economical and efficient adhesion is no longer a matter of chance. It is rather a matter of science . . . careful laboratory study and analysis by highly trained adhesive chemical engineers.

PAISLEY FOLDING BOX ADHESIVES give you extra benefits. One or more of the following features are obtainable in every **PAISLEY FOLDING BOX ADHESIVE** you may select:

- (1) Non-stringing at high speeds.
- (2) Odorless, non-staining.
- (3) Non-crystallizing adhesion.

- (4) High bonding strength on dry waxed board.
- (5) Water resistance, when required.
- (6) Grades for heavy waxed butter, cheese, frozen food cartons.

Clean machining is an outstanding characteristic of all Paisley Adhesives. Laboratory control assures perfect uniformity of product and performance for any specific machine or paperboard gluing operation.

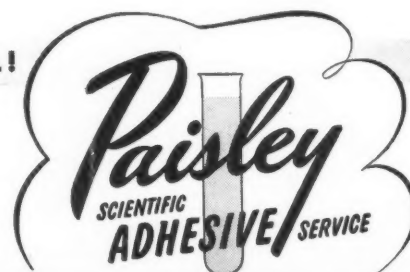
To obtain the proper Folding Box Adhesive to fit your particular requirements, use the coupon below and send for an Adhesive Operation Data Sheet, for your convenience in sending us details of your requirements. Your inquiry will receive prompt attention by the Paisley Laboratory.

TEAR OUT . . FASTEN TO LETTERHEAD AND MAIL!

Gentlemen: Please send me your Adhesive Operation Data Sheet and further information on PAISLEY FOLDING BOX ADHESIVES.

FIRM _____ BUYER _____

STREET _____ CITY _____ STATE _____



PAISLEY PRODUCTS INCORPORATED

Manufacturers of Glues, Pastes, Resin Adhesives, Cements, and Related Chemical Products

1770 CANALPORT AVE., CHICAGO 16, ILL., PHONE CANAL 2220 * 630 W. 51st ST., NEW YORK 19, N.Y., PHONE COLUMBUS 5-2860



Gaylord Boxes

the mark of

Modern Packaging

Corrugated and Solid
Fibre Boxes ●

Folding Cartons ●

Kraft Grocery Bags and Sacks ●

Kraft Paper and Specialties ●

*I*n the big, important field of packaging every type of product from foods to furniture and heavy machined parts, Gaylord correct functional design, precision manufacturing and better materials mean a safer trip for your product no matter how or where it travels.

GAYLORD CONTAINER CORPORATION, General Offices: SAINT LOUIS

New York • Chicago • San Francisco • Atlanta • New Orleans • Jersey City • Seattle • Indianapolis • Houston
Los Angeles • Oakland • Minneapolis • Detroit • Jacksonville • Columbus • Fort Worth • Tampa • Cincinnati
Dallas • Des Moines • Oklahoma City • Greenville • Portland • St. Louis • San Antonio • Memphis • Kansas
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PUT YOUR PRODUCT IN THE NATIONAL SPOTLIGHT



On display, this attractive metal container acts as an *eye-stopper*. Through its effective point-of-sale appeal, every passer-by becomes a potential customer. It is one of National's many standard lithographed metal containers, manufactured in five distinctive colors with aluminum tops.

Get the maximum benefit from your package. Choose a package that represents your product's quality. Consider what National Can offers — a real *eye-opener* — in design and lithography.

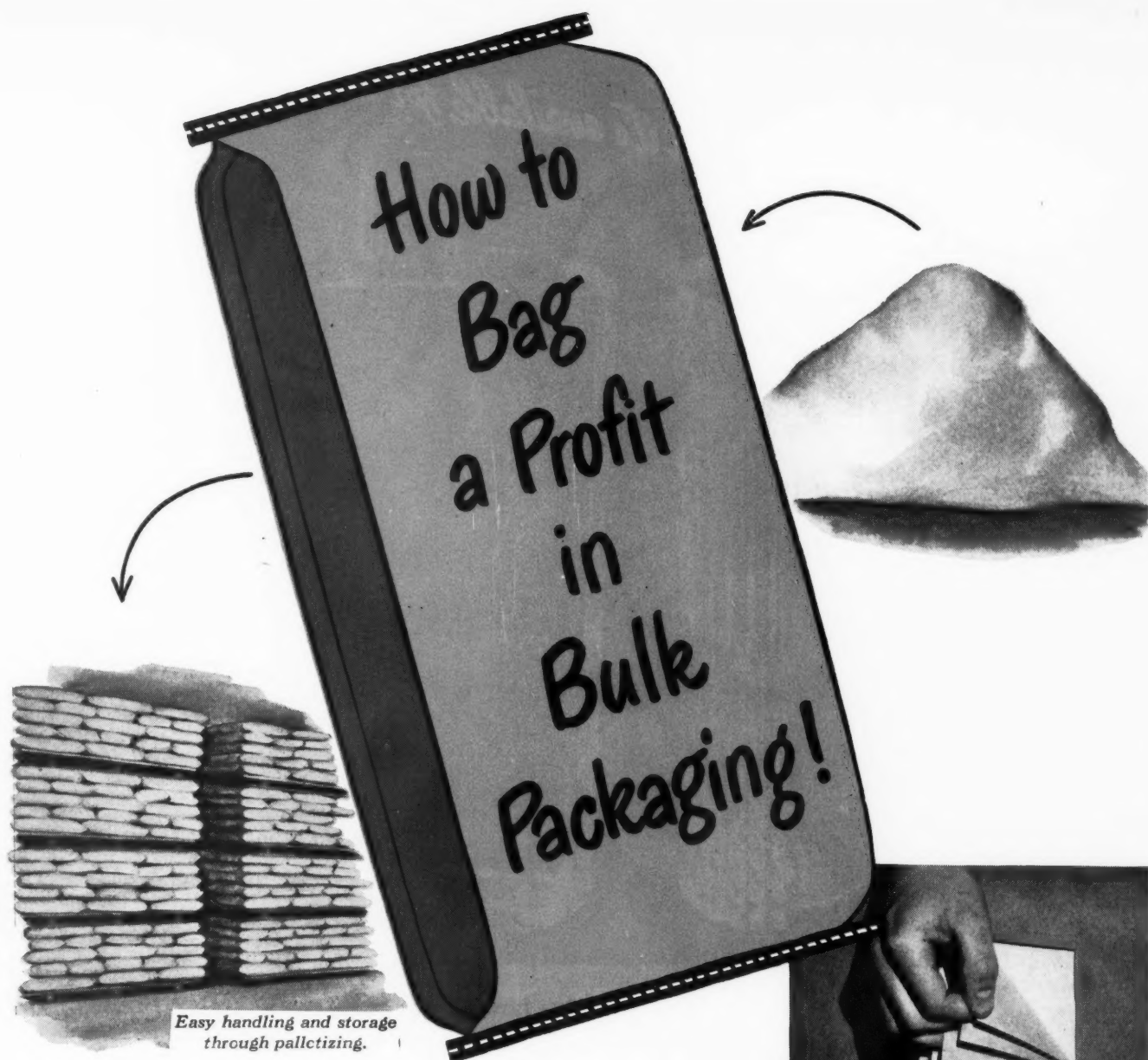
In the design of the can itself . . . in the origination and rendering of the illustration . . . in the selection of effective color combinations . . . in photography, specialists on National's staff work closely with the company's customers. When it comes to the lithography of the metal sheets and the final fabricating of the containers National Can draws on almost a half century's experience. Put your product in the National spotlight. Improve your containers and make them *real sales winners* by utilizing National Can's complete product design service.

NATIONAL CAN

C O R P O R A T I O N

Executive Offices: 110 EAST 42nd STREET, NEW YORK 17, N. Y.

Sales Offices and Plants in: Baltimore, Md. • Indianapolis, Ind. • Chicago, Ill. • Maspeth, N. Y. • Hamilton, Ohio • Canonsburg, Pa. • Boston, Mass. • St. Louis, Mo.



When you have a *big* packaging problem, why not break it up into *little* ones! Now you can do just that—and garner a handsome saving too—even with **bulk chemicals, or other active, hard-to-handle or easy-to-contaminate commodities or merchandise.**

This is made possible by the coating of **BAKELITE Polyethylene** that now appears on an *inner* layer of multi-wall paper bags. These convenient bags are easily handled, easily and compactly stored, and reduce packing costs wherever used!

Inert, tasteless, odorless, non-toxic and *extremely* resistant to chemicals, alcohols, greases, even strong acids, **BAKELITE Polyethylene** does an outstanding job in scores of package uses. In this case it does triple duty as the all-important inner liner. First, it keeps contamination and moisture *out*. Second, it keeps the contents *intact*, chemically as well as physically. Third, even if the paper should tear slightly under heavy impact, the film is strong enough and resilient enough to maintain an intact seal in all but the severest cases.

Preliminary shipments of molding compounds by Bakelite Corporation are already appearing in these perfected multi-wall bags. Soon other products and commodities will switch to them. Be among the first to "bag a profit"! Write Department DG-55 for further information and technical data.

Data courtesy St. Regis Paper Company

BAKELITE CORPORATION. Unit of Union Carbide and Carbon Corporation  30 East 42nd Street, New York 17, N. Y.

FEBRUARY 1948



TRADE-MARKS

BAKELITE

POLYETHYLENE

It's NEW!

and it's available for immediate delivery



**P-45 --- a new
stock bottle in line
with Swindell's
tradition of quality**

It's ready now! Swindell's new stock bottle, designed along classic lines that hold special interest for the perfume and cosmetic trade!

Available for immediate delivery in $\frac{1}{8}$ ounce, $\frac{1}{4}$ ounce, $\frac{1}{2}$ ounce, 1, 2, 3, 4, 6, 8, and 16 ounce sizes.

SWINDELL BROS., BALTIMORE, MD.

200 FIFTH AVENUE, NEW YORK • ROBERTO ORTIZ—HAVANA, CUBA

When you think of bottles think of

Swindell



Bottles or drums ...



Cans or jars ...

**Fill any of them with this new kind of
filling machine for powdered products**

No matter what sort of powdered or granular product you make ... no matter what type or size of container you use ... a General Mills Vacuum Filling Machine will probably fill it faster, cheaper, more accurately.

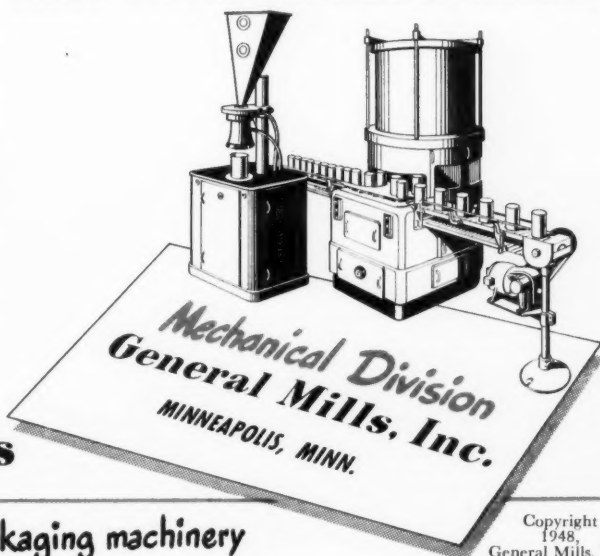
The material isn't forced or shaken into the container ... it's drawn in, without separating mixed powders, by an automatically controlled vacuum in the container itself.

So swift is the vacuum cycle that the filling of 300 one-pound containers a minute is not at all unusual. So sure is the vacuum control that one-pound containers are filled to within plus or minus a fraction of an ounce. So positive is the vacuum action that all the material goes into the container. None escapes to create clouds of dust in the filling room.

To get more information about how these unusual new General Mills Vacuum Filling Machines can solve your

specific filling problem, just drop a line to Dept. C, Mechanical Division, General Mills, Inc., 1620 Central Avenue, Minneapolis 13, Minnesota.

SALES OFFICES IN PRINCIPAL CITIES



General Mills Vacuum Filling Machines

Made by one of the world's largest users of packaging machinery

Copyright
1948,
General Mills, Inc.

*Packaging's last job is of **FIRST** Importance*



—and First Thought in
**Cellophane
Wrapping is
Scandia**

WITH or WITHOUT
TEAR TAPE

for
easier
opening

available for
many sizes

up to
250
per
min.



Manufactured under Bronander Patents

SCANDIA wraps control moisture
to keep your product **FRESH . . .**

Whether you use glassine or cellophane to retain products in prime condition, never select your high-speed wrapper until you've seen **WHAT** a Scandia machine does for you, and *how economically* it functions, year in; year out!

Scandia Manufacturing Co.

NORTH ARLINGTON NEW JERSEY

**INTRODUCING
THE BEAUTIFUL!
THE SENSATIONAL!
LANOVA CASEIN**

GOLD FOILCHROME*

**LOW-IN-COST
EASY-TO-USE
EXCELLENT-FOR-PRINTING**

With its smooth, even coating, this beautiful Gold Foilchrome is excellent for printing, even with ordinary inks. There is no cracking when folded — no color comes off when finger is run along the folded edge.

Boxmakers — simply use your own regular glue or paste — no special adhesives needed.

Lanova's sensational Gold Foilchrome is available in 26" rolls and sheets in whatever length you require. Special widths to order.

AMAZINGLY LOW PRICED! COMPARE!

Less than 1 ream.....	\$24.50 per ream**
1 ream	16.40
2 reams	15.40
4 reams	14.40
12 reams	14.15
24 reams	13.90
48 reams	13.65
100 reams	13.40
5,000 lbs.	13.15
10,000 lbs.	12.40

**Prices are per ream 20 x 26 — 500 in 26" width rolls,
4 reams per roll, f.o.b., N. Y.

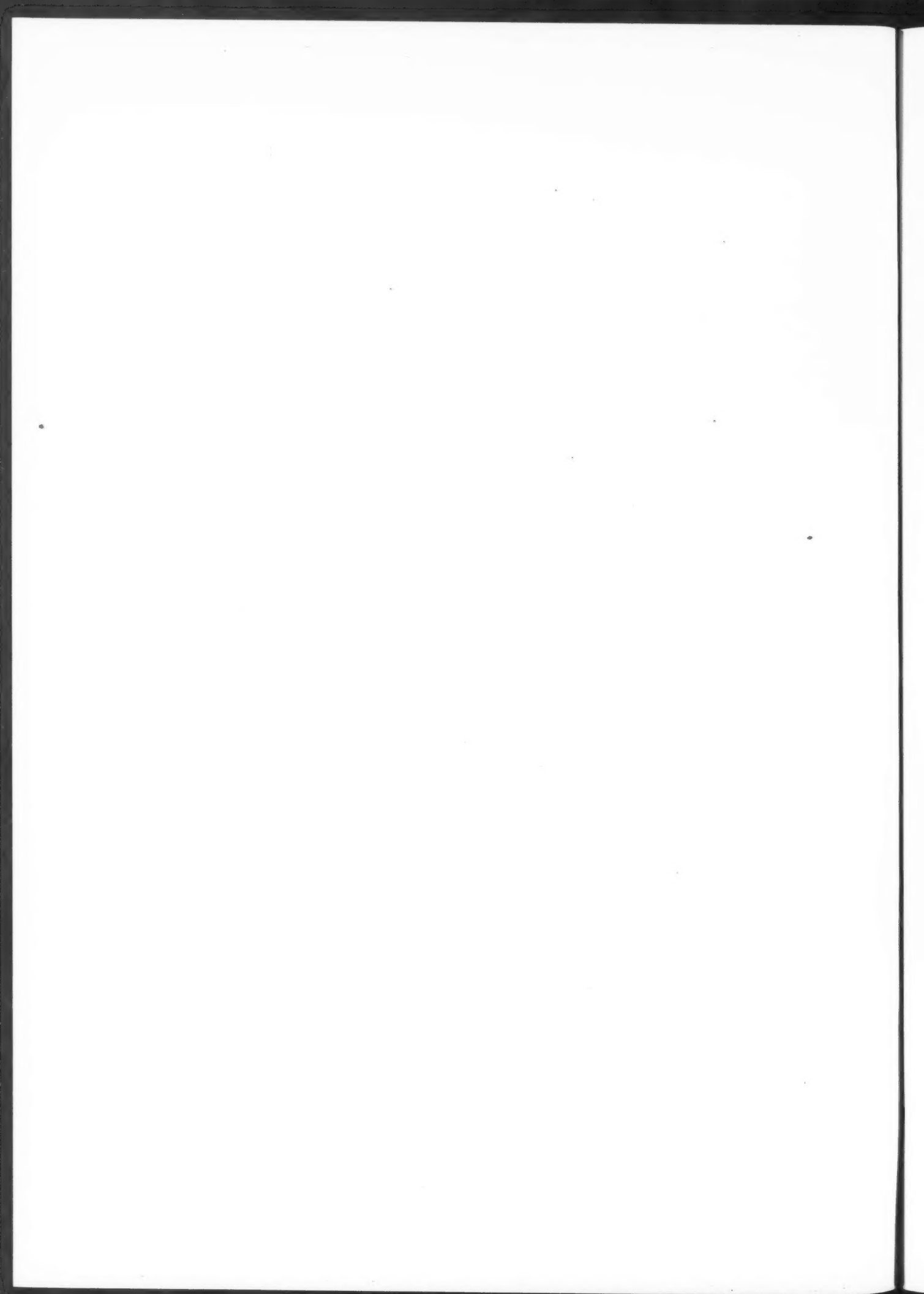
WIRE OR MAIL YOUR ORDERS NOW!

For free sample sheets and additional data on our Gold Foilchrome and other superb box and specialty papers, write or wire today.

LACHMAN-NOVASEL PAPER CORPORATION

109-111 Greene Street • New York 12, N. Y.

*This sensational stock also available
in Sat Silver and Bright Silver.



Soft as a Kitten



TOUGH AS A RAM



Note how Tufflex retains its clean, sharp edges even when cut into narrow strips.

That's **TUFFLEX!**

Handle a piece of Tufflex and you'll know why it's making big news as an interior packing material! Here's a felted wood fiber blanket that's soft as a kitten's fur, light and fleecy—yet tough enough to take heavy impact blows! Tufflex, too, is easily cut to any size or shape—will not readily tear or pull apart—is so flexible that it easily tucks into small corners or openings.

Because it provides a unique combination of qualities, Tufflex is solving many a tough packaging problem today. Available in rolls and sheets of various thicknesses and widths, it gives you a greater measure of packaging safety. Get all the facts about Tufflex—mail the coupon!



*REG. U. S. PAT. OFF.

MADE BY THE MAKERS OF *Balsam-Wool*

WOOD CONVERSION COMPANY
Dept. 208-28 First National Bank Building
St. Paul 1, Minnesota

Gentlemen: I want to know more about Tufflex. Please send me complete information.

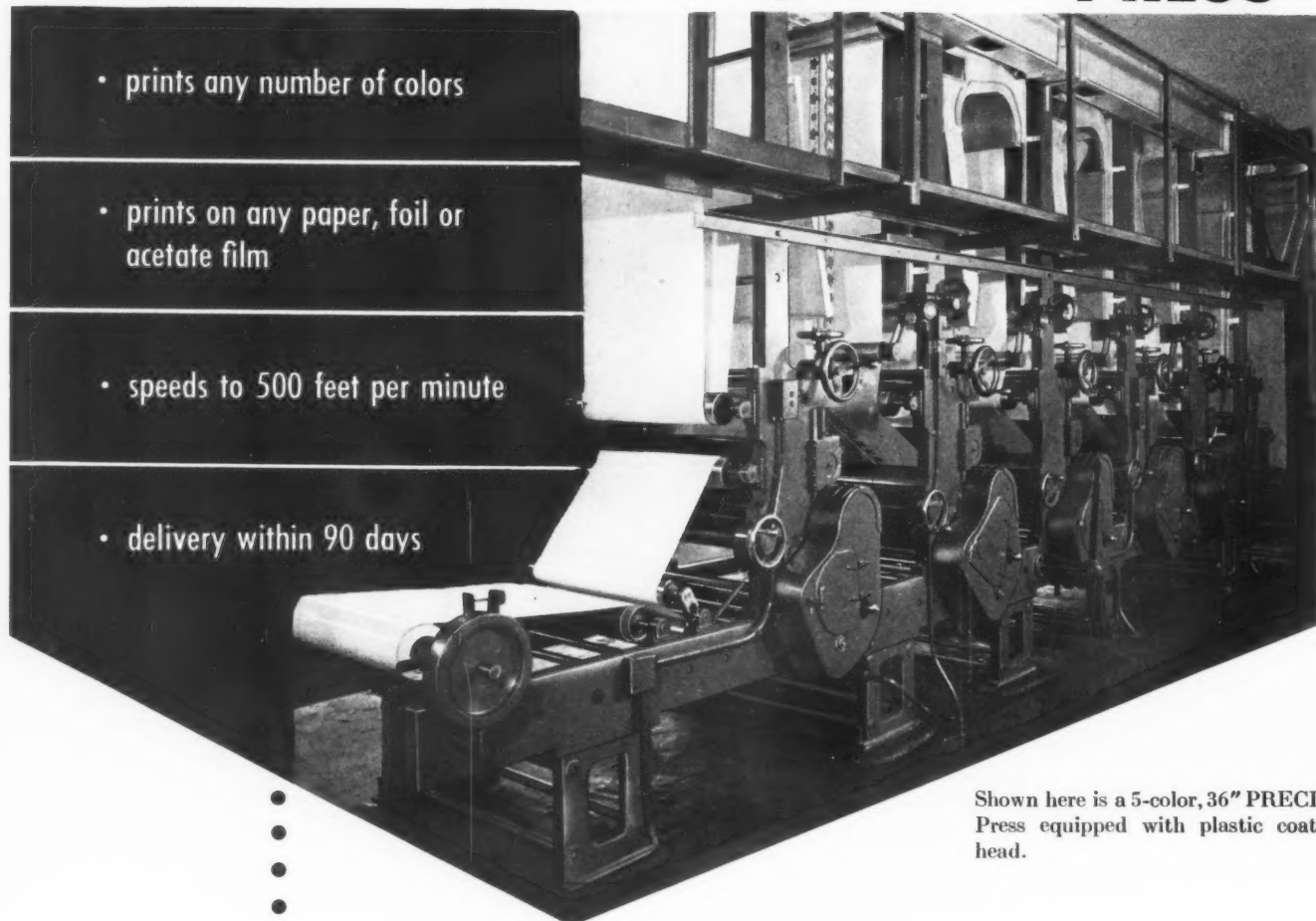
Name

Address

City..... State.....

ALL-NEW *Multi-Color* GRAVURE PRESS

- prints any number of colors
- prints on any paper, foil or acetate film
- speeds to 500 feet per minute
- delivery within 90 days



Shown here is a 5-color, 36" PRECISE Press equipped with plastic coating head.

HERE'S why the PRECISE* is the high-speed rotogravure press you've always wanted. It prints on almost any grade of paper—carton stock, foil, cellophane, glassine, waxing. It prints solid colors or halftones or combinations of both. It's fast—speeds of 400 to 500 feet per minute. It's accurate—not only is perfect register maintained at any speed, but motorized rubber pressure rolls automatically insure correct printing cylinder pressures.

And this press is *really* adaptable. You can easily interchange engraved cylinders of different diameters. With the addition of a special coating head, you can do plastic coating of any type. Other accessories allow you to do embossing, slitting, rotary die cutting, folding and sheeting.

This new rotopress comes in any cylinder width you need. Electronic registering equipment is optional. And here's a vital point . . . you can get delivery on standard sizes of this versatile press *within 60 days*. Prices are appreciably lower than those of other presses of comparable performance.

Write now to Dept. B for free descriptive bulletin.

*Manufactured by The Precise Engineering Co., Chicago, Ill.

GIBBS-BROWER COMPANY, Inc.

Agents

50 YEARS IN PACKAGING

21 East 40th Street, Cable Address: GIBROW New York 16, N. Y.



... *Style*



... **STRENGTH**

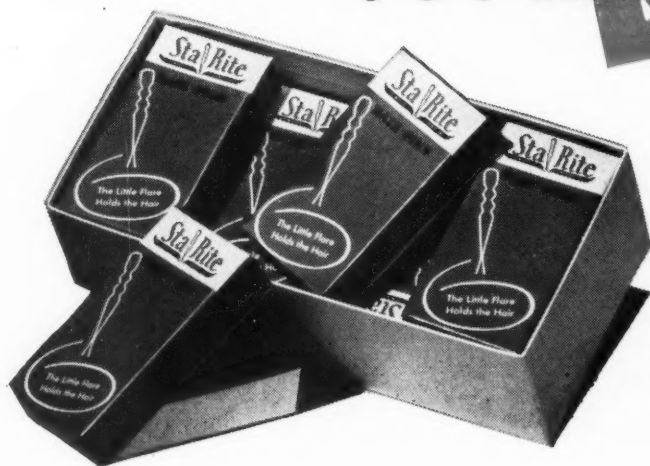


... **SALES**



AT NO EXTRA COST

... **in SET-UPS**



Yes, the three "S's" of better packaging are custom built into every set-up box at no extra cost. It's these three features . . . *Style* through attractive shapes, color contrasts, new design and product identification . . . it's *Strength*, as an intrinsic part of the stayed corner principle of set-up boxes which are built to take rough handling . . . it's greater product *Sales* with greater display area and better sales appeal. These all add up to economical packaging and shipping. Consult your nearest set-up box manufacturer about your packaging, for with the three "S's" of *Style*, *Strength* and *Sales*, you will be rewarded with economical packaging.

FOR INFORMATION OR SERVICE.... CONSULT YOUR NEAREST SET-UP BOX MANUFACTURER



NATIONAL PAPER BOX MANUFACTURERS
Association

AND COOPERATING SUPPLIERS

Liberty Trust Building, Philadelphia 7, Penn.

THE NEW ROTO BAG MACHINE*



built for dependable, high-speed operation

seals every seam with heat and glue

Here is the bag-making machine which measures up to the exacting requirements of both packers and paper converters. Here's why . . .

In the first place, it makes *stronger, better* bags from such heat-seal coated materials as cellophane, diafane and aluminum foil, and, unlike ordinary equipment, the ROTO applies an additional glue reinforcement to

every heat-sealed seam for extra bag strength.

Secondly, the ROTO is built for heavy-duty, trouble-free performance. It has the simplicity of operation desired by packers, at speeds of interest to converters. All parts are precision-tooled from the finest materials. Every ROTO BAG MACHINE is sold with an unconditional guarantee.

Write for complete details.

* patents pending.

ROTO BAG MACHINE CORP.

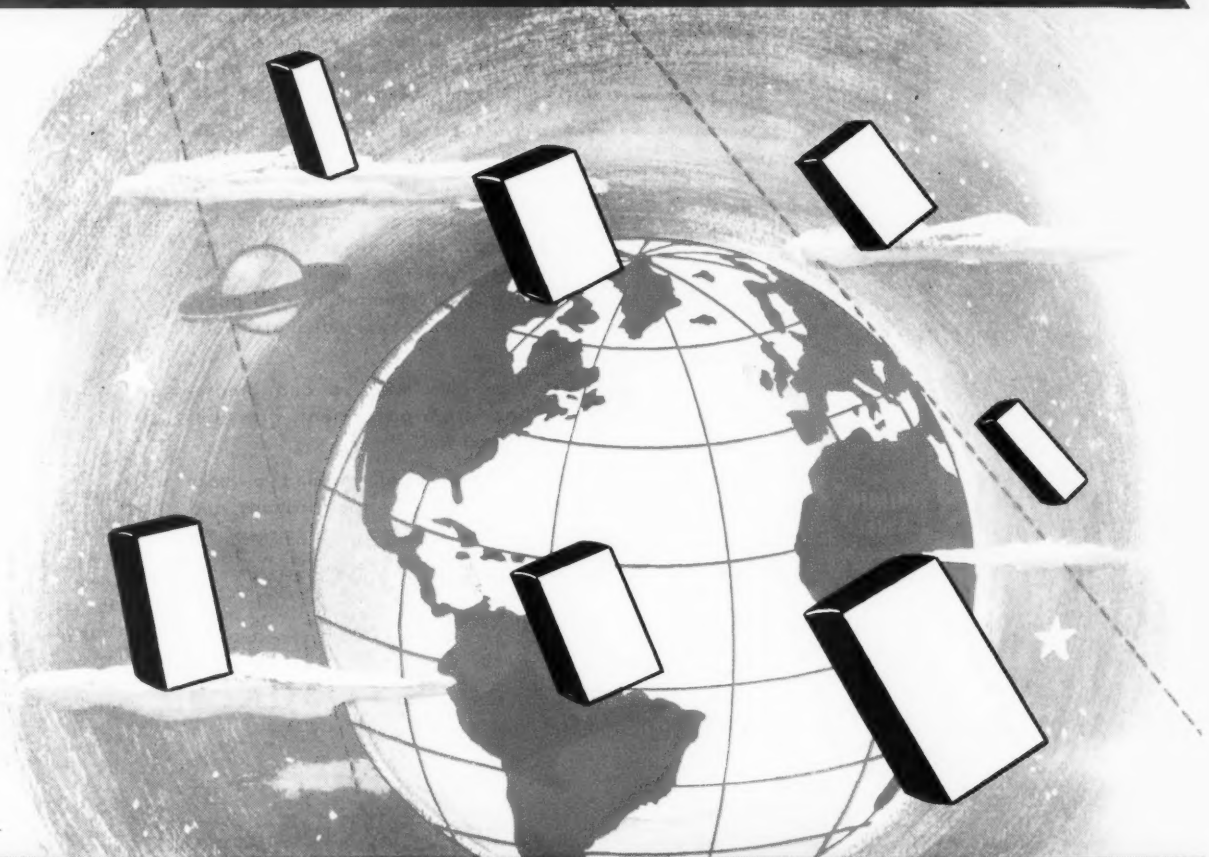
310 EAST 22nd STREET

NEW YORK CITY 10, N. Y.



AMERICAN COATING MILLS

DIVISION OF OWENS-ILLINOIS GLASS COMPANY



WORLD'S LARGEST PRODUCER OF CLAY COATED FOLDING PRINTED CARTONS

SALES OFFICES: Elkhart, Ind. • Chicago • New York • St. Paul • Memphis • Grand Rapids • Evansville • Detroit

PLANTS: Elkhart • Chicago • Memphis • Grand Rapids

There's nothing more beautiful
than a *Curve*



Artists will tell you that the most beautiful line is the curved line. Practical packaging engineers and sales-seeking merchandising men who design containers for utility and sales appeal know this to be true.

Philadelphia Round Containers are designed to influence an UPWARD CURVE in your sales chart.

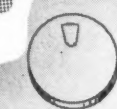
Whether you package drugs or toys, textiles or foods, chemicals or candies, calendars or cosmetics, we have sales-stimulating Round Containers, and paper tubes to fill your needs adequately and economically.

Select your own moisture and grease-proof liner from parchment, glassine, paraffine and foil.

Prompt delivery—usually within two weeks after receipt of your specifications and labels. We invite orders of all sizes. Contact us today!



CLOSURES



Pouring Spout



Friction Plug



Slip Cover



Semi-Perforated



Special
Cap Dredge



Plain Dredge



Lip Top

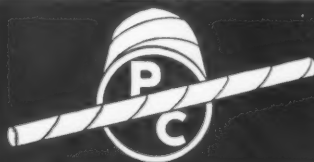
Round Packaging for Every Purpose

CORES AND TUBES • COMBINATION TIN AND ALL PAPER CANS

ALL PAPER CANISTERS
PAPER CORES AND TUBES

FRICTION PLUG CANISTERS
TREATED CONTAINERS

INSECTICIDE PUMP GUNS
TELESCOPIC MAILING CASES



PHILADELPHIA CONTAINER CO.

SWANSON STREET AND OREGON AVENUE
PHILADELPHIA 48, PA.

10 WAYS TO USE CEL-O-SEAL

REG. U. S. PAT. OFF.

The seal with all-round advantages



1. FRESHNESS AND FLAVOR of this vacuum-packed coffee are guarded by "Cel-O-Seal." Originally used with a war-time closure, "Cel-O-Seal" is now standard protection.



2. THE TAMPERPROOF "Cel-O-Seal" band is an eye-catching label that guarantees genuineness. Nothing can get into the container—just as nothing can leak out of it.



3. THE RUBBER CLOSURE on this multiple-dose vial is sealed in place by "Cel-O-Seal." Thus the user is assured of pharmaceutical purity throughout the life of the container.



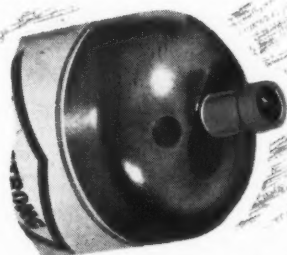
4. FOR RE-USE CONTAINERS, "Cel-O-Seal" makes an ideal closure. Available in a wide range of sizes, it can be used with plastic, glass, porcelain, metal, cork and paper materials.



5. CLOSURE ATTACHMENTS are held securely by "Cel-O-Seal." This recipe booklet is bound to stay in place. There's no chance for it to slip off or obscure the label.



6. A PREMIUM EXCHANGE TOKEN that can't be illegally duplicated! Housewives simply retain the "Cel-O-Seal" band to cash in on premium offer made by this manufacturer.



7. SCREW-VALVE CLOSURE can't come open in transit or as a result of tampering. This aerosol dispenser is an example of how makers of new products find new uses for "Cel-O-Seal."



8. PROTECTION AGAINST SOILAGE in store is assured by the transparent "Cel-O-Seal" band around the cork grip of this fishing-rod handle. The grip remains clean and fresh.



9. THE TAX STAMP is kept in place, even after bottle is opened, by this special "Cel-O-Seal" Wind-O-Band* seal, which has transparent windows to display and protect the stamp.

10. THE 10th WAY? We're leaving it up to you... to determine how you can profit by the all-round advantages of "Cel-O-Seal." Quick and easy to apply... forms a strong, tight seal... available in colors and color-combinations... can be indelibly printed with your message.

Send us a sample of your package. We'll return it promptly, sealed for sales with "Cel-O-Seal!" E. I. du Pont de Nemours & Co. (Inc.), 2494-A Nemours Bldg., Wilmington 98, Delaware.

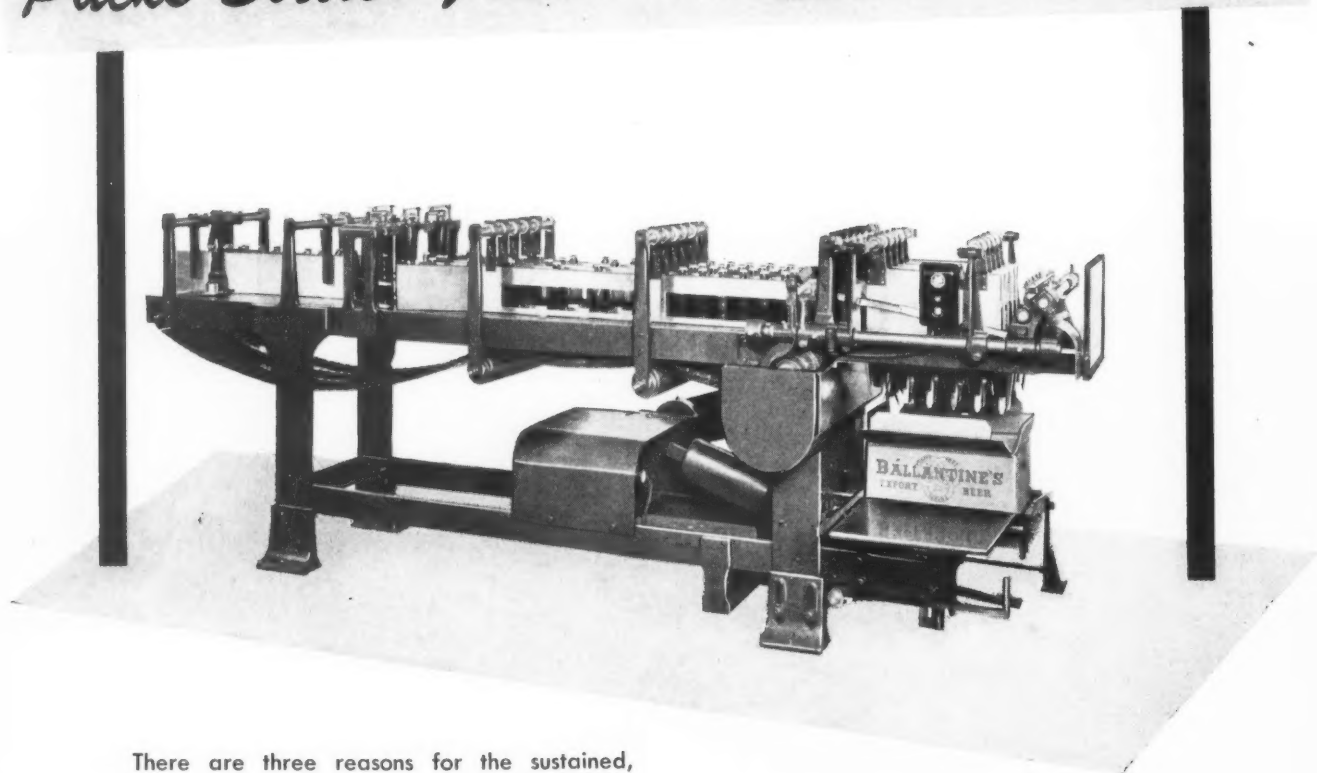
*Trade Mark



BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

DU PONT "CEL-O-SEAL" BANDS

Packs Bottles Faster with Less Maintenance



There are three reasons for the sustained, record high speeds delivered by the Model 830 Bottle Packer. None of the three are secret . . . you can spot them all in the illustration.

First, note the utter *simplicity of design*. Like all Standard-Knapp machines, Model 830 has no complicated insides to get out of order. It's designed to do a basically simple job the easiest, fastest way.

Secondly, mark its massive, *rugged construction*. It's solidly built. It has the strength to operate at maximum speed without rest, without repair, without developing internal stresses or structural weaknesses. Over the long haul, year after year, this machine packs *faster* because it packs with *less* time out for hospitalization.

The third reason lies in the *easy accessibility of parts* for routine upkeep. There are no hard-to-get-at danger points, no hidden lubrication fittings. Upkeep crews find it easy to lubricate, easy to clean. Consequently, there's no danger of stoppages due to neglected maintenance routines and there's greater assurance of peak performance *all the time*.

If you're about to add to your existing bottle packing equipment, or if you're seeking to replace slow, unsatisfactory machines, write for detailed information on the Model 830.

Standard-Knapp Corporation

MANUFACTURERS OF CASE SEALING, CASE PACKAGING AND CAN LABELING MACHINES
FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

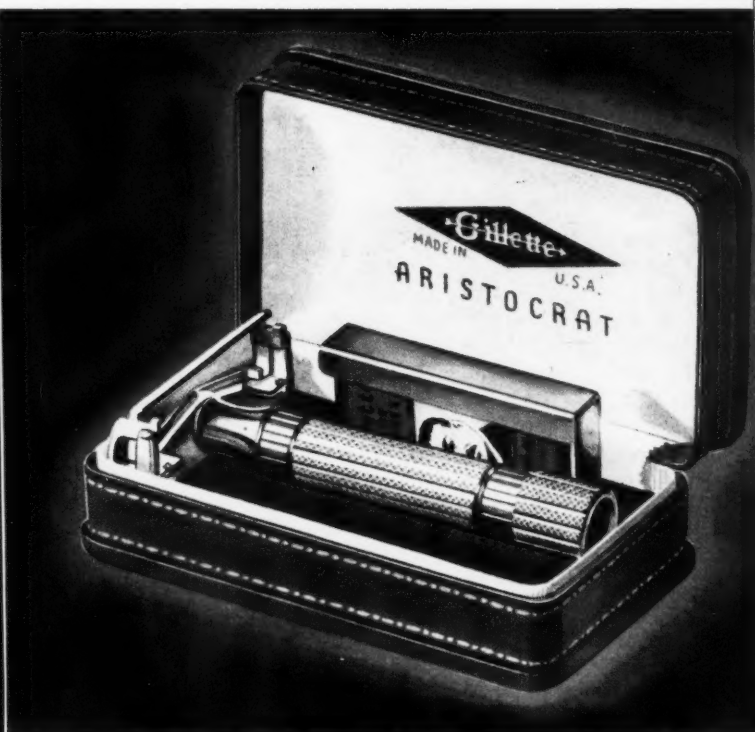
570 Lexington Avenue
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We'll bet the bland barber in your bathroom
was *Packaged BY Farrington*



The odds favor us on this one, as well as does our good customer, the Gillette Safety Razor Company . . . Because — for over 30 years — men who “look sharp, feel sharp and *are* sharp” have been buying their favorite whisker weapon in packaging that’s dashing on display, perfect for protection and smart on any shelf . . . Distinctive showmanship, backed by two generations experience in putting a nation’s priceless and precision products on parade, can boost desire for *your* product, too.

FARRINGTON MANUFACTURING COMPANY

General Offices: 76-J Atherton St., Boston 30, Mass., Canadian Plant: Farrington Mfg. Co., Ltd., 1191 Bathurst St., Toronto 4

It's
Packaged
BY *Farrington*



SPECIALTY BOXES DISPLAY TRAYS METAL SPECIALTIES CHARGES PLATES SERVICE

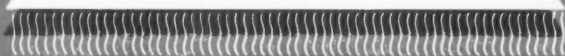


NO LABELING DELAYS

FOR AMERICAN THREAD
COMPANY...

Time and Costs are Cut with

Thermo-Kote*



New Delayed Action

Thermoplastic that Stays Tacky

Quick to spot a good thing, American Thread Company now end labels with Thermo-Kote on their new New Jersey Machine Corporation Pony Label-dri Machine. This revolutionary thermoplastic paper *remains workable* for several minutes after the activating heat is removed. Because heat and pressure need not be applied *simultaneously*, flexibility of operations is increased.

You'll want *Thermo-Kote, too, when:

- Application of heat affects your product or package adversely.
- You employ materials or surfaces where water cannot be used.
- You're seeking cleaner, speedier application.
- Adherence without wrinkles or welts is important.
- You require a firm, positive, lasting bond to surfaces such as glass, metal, wood and rigid plastics.

For help in adapting Thermo-Kote to your special applications call on Nashua's Sales Research Department. Samples of Thermo-Kote are yours for the asking — write today!

For Simultaneous Heat and Pressure Bonding it's *Thermo-Stix!

Twin brother to *Thermo-Kote. *Thermo-Stix is the new Nashua-developed heat-sealing paper with the higher blocking and lower activating temperatures. For bonding to waxed, plain and clay coated papers, lacquer coated surfaces, cellulose acetate coated products, cellophane, glassine, metal and metal foil. Write for complete information.

*Patent and Trade-Mark Application Pending

NASHUA

MAKES PAPER MAKE
MONEY FOR YOU

NASHUA GUMMED AND COATED PAPER COMPANY
NASHUA, NEW HAMPSHIRE

Modern packaging



Vol. 21 No. 6 February 1948



ANNOUNCEMENT pamphlets, full-color printed, were sent to dealers a month before Kroger's new blue labeled citrus fruit packs arrived in the stores, telling of forthcoming changes. This is one of many ways of smoothing a package transition.

CHANGE-OVER

**A survey of industry practices in replacing old stocks with
newly designed packages brings out many valuable tips**

The last three years have been most favorable for making changes and improvements in package-surface design. A review of MODERN PACKAGING for this period reveals the introduction of redesigned packages by hundreds of companies which have taken advantage of boom-demand and low inventories to effect these transitions.

With increasing competition, the advantages of improved packages become even more essential, but—will it be as simple under such conditions to dispose of inventories of old packages?

To find out how most companies solve the problem, if any, of getting rid of old packages and of making the switch from old to new, MODERN PACKAGING has queried more than 60 leading companies—principally in the food, drug, cosmetic and household-products fields—that were known to have made major package changes during the last few years.

From their combined replies, it is possible to list normal steps in such procedure and to point out many valuable suggestions to assist package-planning committees, designers, advertising, merchandise and pro-

duction men whose products have either special package characteristics or marketing conditions.

The ideal objectives are quite simple and form a pattern of procedure which practically all companies aim to follow:

1. Check all stock in old packages on dealer shelves, in distributor's warehouses, in manufacturer's warehouses. This is usually information that is easy to obtain, particularly if a company's sales forces are in frequent contact with all sources of distribution.
2. Get inventory down.
3. Discontinue ordering new supply of old packages.
4. Run down present stock on hand.
5. Have new package ready for production and distribution in relation to the diminishing supply of the old.

According to the majority of the replies, most companies can reach these objectives with very little difficulty by the following methods, which vary slightly with the type of product being sold and the obviousness of the change to the consumer:

1. *New and old on the shelves at the same time*—Often-times it is merely a matter of proceeding with production of old packages until packaging supplies are used up, then starting shipment of the new ones. This can usually be done on everyday-purchase items for which demand is high and turnover fast. This practice was followed extensively during the last few years for many products which were in short demand. Consumers were so glad to get anything that they were not disturbed if they got old instead of new packages. Many companies have taken advantage of this situation to introduce new surface designs which in such a market could be shipped to the trade and displayed right beside the old ones.

Such procedure can be followed also when the design changes do not affect established package recognition. Good examples are the new Super Suds packages intro-

duced last year by Colgate-Palmolive-Peet Co. (MODERN PACKAGING March, 1947, p. 136.) In this case, there was no major alteration of the front panel, but a new series of nine different pictorial promotions on the backs of the cartons. When the company decided to make this change, old cartons were used up before the company started running the new ones. The new were then shipped right out and allowed to filter into distribution channels without promotional fanfare. It was felt that the new packages, with their pictorial suggestions for the many uses of Super Suds, would do their own selling in the hands of the consumer without any noticeable change in identity.

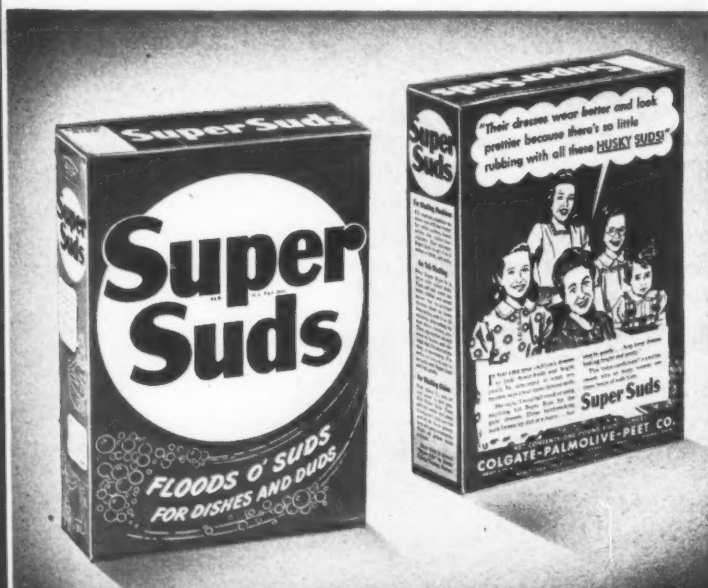
2. *Notify dealers of change*—Many companies notify dealers and distributors of an impending package change and give them sufficient time to clear out old stock by a certain date when they will receive redesigned packages. This method was used by many companies to replace wartime substitute packages. It is also a good method when a change in size is contemplated. Recently Colgate's Vel and Proctor & Gamble's Dreet were increased from 12-oz. cartons to 15-oz. In such cases, the dealer should not be left with any of the smaller packages on hand. By word of mouth, therefore, salesmen can announce the coming change, perhaps two or three months in advance. The company can slow down shipments so that the dealer stocks are used up before the larger packages are received.

3. *Geographic distribution*—When there is a radical change in package design, many companies start clearing out the old by first introducing the new in restricted geographic locations. This not only affords a good market test for new packages, but offers ample time to dispose of old packages. In such cases sales forces announce in the specified areas that new packages are coming. Dealers and distributors in that area are given the privilege of returning the old packages in exchange for the new. The old packages are in turn redistributed for sale in other areas where the old packages are still being continued. The territories where the new packages are being distributed are increased gradually until complete distribution of the new is accomplished. Such programs can take from a few weeks to several years, depending upon the turnover of the products and the extent of their distribution.

In the cosmetic field, Charles of the Ritz accomplished in this manner a clean-cut job that won the unanimous good will of cosmetic buyers.

In the spring of 1945, Charles of the Ritz completely redesigned its facial-treatment line. This meant modernized pink labels in place of former green ones. It meant new round bottles with new closures, both different in shape from the old ones. It meant white caps and pink labels on cream jars which formerly had green caps and green labels. The change was abrupt; there was little relationship between old and new. Naturally, retailers would not want to sell the old ones beside the new. Charles of the Ritz, therefore, divided the entire country into five zones: West Coast, South-

OLD AND NEW Super Suds packages were shipped at same time when Colgate-Palmolive-Peet introduced series of nine new back panels. There was no change of front-panel identity; therefore no need to replace old packages.



GEOGRAPHIC METHOD used by Charles of the Ritz to replace all old packages won unanimous good will of cosmetic buyers. Country was divided into five zones. Old packages were withdrawn and new ones introduced in each zone by systematic program of timing that allowed for disposal of all old packages over a seven-month period.



west, Middle West, Southeast and Northeast. The company started introducing the new packages on the West Coast. On March 1, 1945, they notified all cosmetic buyers in that zone that on May 1 of that year there would be a whole new family of Charles of the Ritz packages and urged the buyers to push the sale of their old stock so they would be low in inventory upon arrival of the new packages. When the company started making shipment of the new packages, they told buyers to ship back by air freight all stocks of old packages, to be redeemed by the company at full price. In this way, every store on the Pacific Coast handling Charles of the Ritz products had the new packages on the counter by May 1. The returned old packages were distributed to dealers in the other four sections of the country who were still handling the old packages. Two months later, the new packages were introduced by the same method in the Southwest zone, but the company still had three zones in which to sell old packages. Due to the shorter distances, the Midwest was allotted a time limit of 45 days to complete the change-over, the Southeast 30 days and the Northeast 15 days. In New York stores, the transfer from old to new packages was done in some cases overnight.

By this procedure, Charles of the Ritz disposed of practically all old inventory and completed the entire change-over in seven months. The only substantial surplus was the old stock from the stores in the last zone. This meant a small quantity of old labels that had to be scrapped; some liquids to be salvaged. There was little loss on face powder, since Charles of the Ritz sells powders blended to individual requirements and therefore did not have boxed powders to dispose of. The company realizes that the change was made at a time when market conditions were most favorable. It also believes it was the most efficient way to do it, but, says Richard Salomon, president of the company, "It was expensive and I'm not sure we'd do it just that way again."

There is another thing to watch in announcing a



TRANSITION PACKAGE is a device that was used successfully by General Foods to introduce its new family of cereal packages. During change-over period, all packages carried new design on front panel, old design on back.

change if you expect to enlist the good will of buyers: Be sure you have a sufficiently noticeable package change if you are asking dealers to push your old stock. Cosmetic buyers express themselves as "disgusted" with one cosmetic firm which made a big to-do about a forthcoming package change so slight that when it arrived you could scarcely find it. Such high pressure was merely a trick to increase sales, they felt.

4. *Transition packages*—A device used successfully by General Foods is the change-over or transition package. This was employed for Swansdown cake flour several years ago and more recently when GF redesigned its complete family of Post cereal packages. For a limited time, the cereal packages had the old de-

sign on one side of the cartons and the new on the opposite panel. In this way the transition packages bridged the gap between old and new. During the change-over period grocers might have old, new and change-over packages on their shelves at the same time, while consumers became familiar with the new and identified it with the old. They could face out all old panels or all new panels or a combination of both, depending on their stock.

When ideal can't be attained

The foregoing methods for introducing package changes are the most usual and are employed successfully by most companies to complete the whole operation. However, there are times when the best plans fail and it becomes necessary to give additional aid to jobbers and dealers. Such inducements may be offered through:

1. *Deals*—Special display allowances per case, bigger commission to salesmen, sometimes P. M.'s to clerks, will help to speed up the reduction of inventory and maintain the price of a price-protected line.

2. *Limited-time offer*—This is sometimes referred to as a fair-trade holiday. It usually means that for a specified length of time, a company will offer its product or line of products to all retailers who handle it, or to those in a certain trading area, for sale at a price less than the usual fixed price. Such methods are within the realm of good practice and toiletries counters particularly revealed a considerable amount of such selling during January, this year.

3. *Special price offers*—Occasionally, if a company wishes to close out inventory, it may make a combination offer, such as two of its related items together at a lower price than could be obtained if the two were bought separately. Such offers are often found in the

toiletries field. It may be preparatory to the introduction of new packages, but sometimes only to decrease inventory.

Disposal of returns

In spite of careful planning, goods sent back in exchange for new packages sometimes cannot be disposed of through regular channels, but that does not mean they cannot still be sold.

1. *Export*—Firms with large export business often sell their old packages in foreign countries, particularly if the product is non-perishable and if it is in good condition. Package changes are accepted slowly in foreign markets. In fact, many companies that redesign domestic packages will hesitate to make the same changes for export. Shoppers in foreign lands learn to recognize many American products by the design of the package. If a radical change in package appears, they think they are getting an imitation. This preference for the old is a big aid in using up these inventories.

2. *Close-outs*—Large chains and some of the department stores catering to volume trade will purchase quantities of discontinued lines and are an outlet for old packages. There are also a number of outlet stores that will sell discontinued stock.

3. *Selling to employees*—Discontinued lines are often sold to employees at half price or cost. Employees are usually given the opportunity to buy in limited quantities. In a company with several thousand employees, the disposal of several hundred dozens is a simple matter. One large company delegates one young woman employee whose job it is to handle such disposition of discontinued lots. A note sent by her to employees announcing the sale will usually get rid of surplus in a short time.

4. *Premiums*—Sometimes (Continued on page 184)



CURRENT CHANGE-OVER of redesigned Cashmere Bouquet line is being accomplished gradually as inventory of old is used up through careful control of shipments. This program began with introduction of Cashmere Bouquet Beau Cake last year. (See MODERN PACKAGING, March, 1947, p. 136.)



This month's COVER PACKAGE*

No. 14 of a series

THE PROBLEM:

A manufacturer proposes to market a new brand of household wax. There is nothing in the product that is basically different from other good waxes, so it is apparent that he will have to lean heavily on package appeal to win acceptance. Realizing that approximately 90% of household waxes are purchased by women and that most package designs for this product now on the market have predominantly male appeal (the majority having red, yellow and black for color schemes), he suggests a theory of design, both in color and composition, that will appeal primarily to the housewife. At the same time, cost factors will not permit anything unusual in package form. To keep his supply situation flexible, he plans to use both a metal can, for the large size, and a glass container, for the small size—both to have conventional threaded metal closures.

THE SOLUTION:

The designer has produced an harmonious assembly of color and design elements that seems to convey a feeling of efficiency, yet has none of the "work till it hurts" appearance of packages for most such products. He has departed from conventional colors to produce a package that will not offend lady's aesthetic sense even if she keeps it on an open shelf in her kitchen. The design is equally adaptable to the lithographed metal can and the paper label. The wood-grain motif of the horizontal panel makes a suggestive background for the white lettering of the trade name in a script that has the soft, flowing qualities of the wax itself. The sales story is succinctly told in five words above and below the name band. A simple, die-cut paper label fits around the opening and covers the bare top of the can—identifying the contents when stored on a closet floor and giving additional printed suggestions as to most effective use of product.

THE DESIGNER:

American-born and orphaned at four, E. Leonard Koppel was placed in a mid-Victorian home with staid adults who planned for him a career as a store clerk. Encouraged by friends who recognized his artistic bent, he kicked over the traces and at 16 struck out to find if there was a place for him in the design field. His first taste of pen and paint was in animated cartooning. During this period he was commissioned to design a wrap-around label for a copper-bottomed wash boiler. This opened his eyes to the opportunity in package designing. After 10 years as art director with printing firms specializing in packaging (supplemented by academic studies), he established his own studio in New York and soon built up a list of clients including Reefer-Galler, J. A. Fischer Co., Hickok, Treo, U. S. Plywood, Elizabeth Arden, Schenley, Penetone, Western Electric and Conti. Margaret O'Brien (cosmetic line) claims to be his youngest client.



E. LEONARD KOPPEL

* Brand and company names used in the hypothetical design are purely fictitious; the design remains the property of the designer who conceived it for this cover illustration. Any resemblance to any existing package is purely coincidental. Wood-grain paper and linoleum patterns by permission of Hughes & Hoffman and Congoleum-Nairn, Inc.

EYE APPEAL FOR ICE CREAM

Dean's new color-coded cartons demonstrate merchandising features that are essential to self-service selling in food stores

Nutritional authorities point out that much of our enjoyment of food is visual rather than gustatory. A properly balanced meal, they emphasize, should take into account the general appearance and color values of the foods which comprise it. This principle is of vital importance in the visibility packaging of fruits, vegetables and other food products, wherein the appetizing appearance of the food itself is a sales stimulant.

Unfortunately, the physical characteristics and storage requirements of some types of foods, such as ice cream, militate against visibility packaging and display. Much progress has been made in the development of ice-cream containers which are adaptable to modern high-speed filling equipment, may be stored conveniently in the home refrigerator and are easily opened for

serving. However, the problem of flavor identification and appetizing color has been slighted in many instances and rarely given adequate consideration as an integral element of package design.

When the Dean Milk Co. of Chicago added ice cream to its line of dairy products in May, 1947, it set out to do a thorough job of flavor identification in the actual printing of the package, rather than resorting to the usual practice of stamping a standard package with different flavor names and running the risk of having the marking obliterated or mis-read because it was too faint in the first place. The resulting family of Dean cartons, displayed in the accompanying full-color illustration, not only solved the identification problem, but opened up new merchandising and display possibilities.

APPETIZING COLORS not only boost impulse buying, but color and design provide positive flavor identification to simplify stocking and aid customer in making selection.



COLOR PLATES COURTESY CONTAINER CORP. OF AMERICA.

The entire Dean ice cream program is based on a fresh concept—the conviction that the food store is the logical place to sell ice cream to the housewife. Following through on this principle, the Dean company, in cooperation with a major package supplier, worked out a group of cartons specifically designed for self-service merchandising from refrigerated display cases in retail food outlets.

The basic package used for the Dean line is a linerless square Philadelphia, or No. 2 type folding carton of 16-point ice-cream board, hot waxed on both sides. Construction of the carton is ideally suited for use with high-speed filling machines. A spot-glue feature on the front flap provides a secure seal which is easily broken by the user when the product is to be served. Shallow ribs formed in the carton blank transfer their imprint to the product and facilitate slicing in equal portions.

Color is keyed directly to the flavors and is effectively employed to emphasize package structure and facilitate opening of the package. The flavor names are printed prominently on the top and front panels, so that even the most myopic customer can make a selection without the aid of a magnifying glass. Names are printed in easily readable caps and stand out sharply against rectangular white or colored panels.

Most of Dean's volume is concentrated on the three "old reliable" flavors—vanilla, chocolate and strawberry. On these cartons, a light cream color is used for vanilla, pink for strawberry and brown for chocolate. In addition, there are several special flavors, one of which is promoted twice each month. Among the special flavors offered from time to time are pecan toffee, almond toffee, peach, cherry nut, toasted almond, chocolate chip, mint stick and butter pecan. In each instance, colors used on the printed carton are symbolic of the flavor which it contains. On the chocolate chip carton, for instance, a white lid clearly distinguishes it from straight chocolate, which has a chocolate lid.

With the relatively small number of flavors offered during any single month, a close correlation between ice-cream production and carton runs is not too difficult to maintain. The two-color carton blanks are printed by Ben Day, using zinc plates in an assorted form. The simple, attractive basic design permits colors to be changed by means of a wash-up or a simple plate change-over.

The modern styling of the cartons, with colors used boldly against the background of white paperboard, gives the packages strong family identity. Design unity is enhanced by the distinctive logotype—a circular panel with the words "Dean's Ice Cream" above a silhouetted heaping dish of the popular American desert. The name and address of the manufacturer appear in small type on the front flap, just above the notation, "To open lift here." The bottom panel carries a list of other Dean Milk Co. products.

The design treatment of the Dean cartons stems directly from the somewhat unusual type of merchandising program through which the new line is being sold. The product is distributed through several types

of food outlets, including both chain and independent stores. It is sold only to dealers having their own low-temperature storage or dispensing equipment; unlike many ice-cream manufacturers, the Dean firm does not provide the retail outlet with the self-service cabinets.

All sales are on a straight self-service basis. Two types of cabinets are utilized—the prewar slide-top variety and the more modern open-type case with mirror in back, which is gradually supplanting it. In order to hold the product at the desired degree of hardness, a temperature of 5 deg. F. or lower must be maintained. In some stores the ice cream is combined with frozen fruits and vegetables in cases 12 ft. in length; others use smaller cases holding ice cream only. The Dean ice creams are not stocked with competitive brands, but are sold on an exclusive basis. Accordingly, the design emphasis was placed upon flavor identity rather than the company name.

The Dean ice creams are sold at 57 cents for two of the pint packages, this price including a Jiffy insulated bag. Signs at the retail outlet stress the two-pint sale and it is interesting to note that 60% of the purchases are for this quantity. Under the merchandising plan being followed by the company, the special flavors are promoted in advertising streamers and newspaper ads during the first and third week of each month, with the three standard flavors receiving similar emphasis during the second and fourth weeks.

Produced in the company's plant at Belvidere, Ill., some 80 miles from Chicago, the ice cream is filled into the cartons, frozen and loaded on large refrigerated truck trailers which serve as mobile storage rooms. No inventory of product is maintained at the plant. Upon arriving at a Western Chicago suburb, the ice cream is removed from the trailers at a distributing station and transferred to a fleet of delivery trucks which cover the consumer outlets daily.

"Whereas most drug-store purchases of ice cream are made on an 'immediate use' basis, we feel that through self-service merchandising in retail food outlets it is possible to get the shopper to buy ice cream along with other purchases, for storage and future use," says Sam E. Dean, Jr., president of the Dean Milk Co. "As more self-service cabinets become available, new food-store outlets will be created, thereby increasing the total volume of ice-cream sales."

With searching eliminated by the color key, an orderly separation of flavors is easily maintained in the retail cabinet.

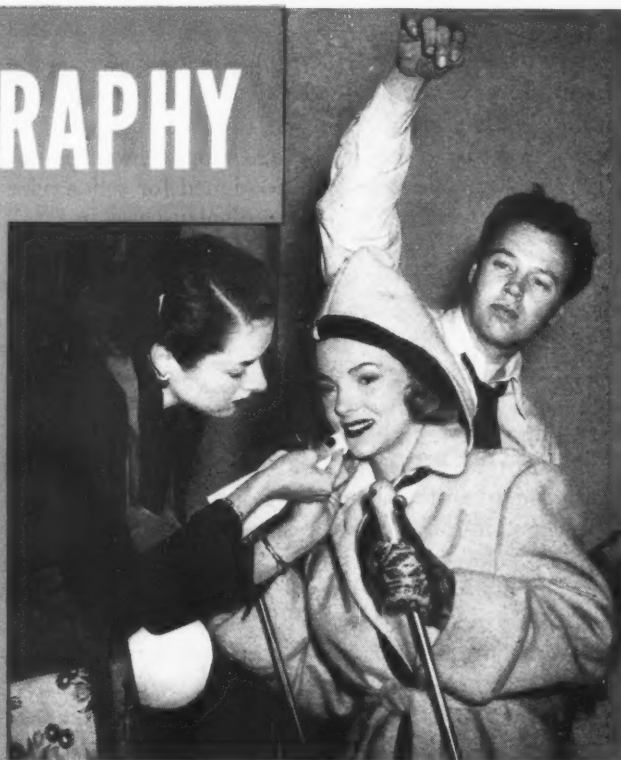
Dean also emphasized that self-service merchandising of ice cream in food stores ties in well with sales of cookies, cakes and related items, in many instances laying the groundwork for combination purchases. With the housewife able to keep ice cream for an indefinite period in modern refrigerators and home freezer units, he is confident that an important new trend in ice cream merchandising is under way.

CREDITS: Design and production of ice cream cartons, Container Corp. of America, Chicago. Filling equipment, Ez-Cell-O Corp., Detroit.

DISPLAY PHOTOGRAPHY

The direct-color shot for lithographic reproduction has distinct requirements too often overlooked by the ad man. An expert points out angles that can make or break your display piece

By GEORGE GREB*



UTMOST CARE in make-up and posing produces the successful direct-color display. Here Mr. Greb sprinkles snow on the head of "Miss North," of the famed Dr. Pepper series, while a make-up specialist touches up the model's lipstick

Direct-color photography for reproduction by lithography to be used for display and point-of-sale advertising is a highly skilled form of the photographer's art. It is the rigid technical, as well as artistic, perfection of the photograph—coupled, of course, with the soundness of the basic display idea—on which the effectiveness of the final display piece depends.

Yet most advertising-agency and company executives responsible for okaying the original photograph for a display are not sufficiently aware of the demands of this medium. The ideal situation would be for the agency to rely completely on the judgment and experience of the photographer, once the idea and layout were in his hands. However, since a lithographic display is an expensive operation and, more important, since the photograph is the crucial point at which correction can be made, this is the basic point of agency or company control.

In an effort to aid executives at this basic point, I should like to explain phases of my experience which may be helpful.

Keys to color choice

Color in display is naturally governed by size. A small counter set-up to hold bottles can employ color more subtle than one seen at a greater distance. However, most displays are viewed at a distance upward of 15 ft. and should tend to conform, therefore, to the tenets of poster art. Predominantly solid-color backgrounds leaning toward the primary colors have been most successful.

A display is viewed at a distance somewhere between

a billboard and a magazine advertisement; it should not be cut up into too many conflicting color areas. Contrast to the background in the figures or props should, where possible, also be in solid color, although this solid can be made more interesting through texturing—textured fabric of a girl's costume, shaded textured color of a glass of beer or the tones of skin.

Stepping-off point for color decision frequently is in the trademark or the logotype. From this point, the color photographer often has to work backwards, so to speak, to fill in the scheme of the display. Variations in tone of the logotype color can keep the display pulled together.

The color photographer strives to put his model or set-ups in the exact colors in which the display will appear. This immediately poses difficulties. For instance, in a display dependent upon high-style fashions for part of its appeal, an original Schiaparelli model available for photographic use may be midnight blue, whereas the display demands that the girl's dress be a royal blue. In such a situation, the photographer can make adjustments to secure the right tone, can lighten with lights, can intensify the background to make the blue bluer.

Or take the case of the hair-preparation display that calls for a luscious redhead as its feature. A long hunt through the model agencies doesn't turn up a redhead with the right face, personality and style. A "brown-

* President, George Greb Studios, Inc., New York.

ette" is finally used in the photograph, her hair transformed in the color processing from its original shade to a delightful red.

The most difficult colors to reproduce are dark greens, dark blues and purples. Preserving detail in these colors—the drape of a dress, the wrinkle of a glove—takes high skill. The photographer frequently must hold back one or more colors to preserve the modeling in such a dark color.

One of the greatest appeals through color is in appetite-inciting food display. A stand-in dummy is used under the lights until the photographer gets his set-up technically perfect and ready for the handiwork of the home economist—the steaming casserole or carefully prepared dish of cold cuts. Keeping food fresh and vital in color under strong lights for two- or three-minute exposures is a test of timing and calls upon special tricks which the color photographer has usually developed for himself and which have to remain his particular success secrets.

Experience shows that many such personal tricks are called upon for photographing ice cream, butter and beer—three highly temperamental foods under hot lights.

Trends and considerations in size

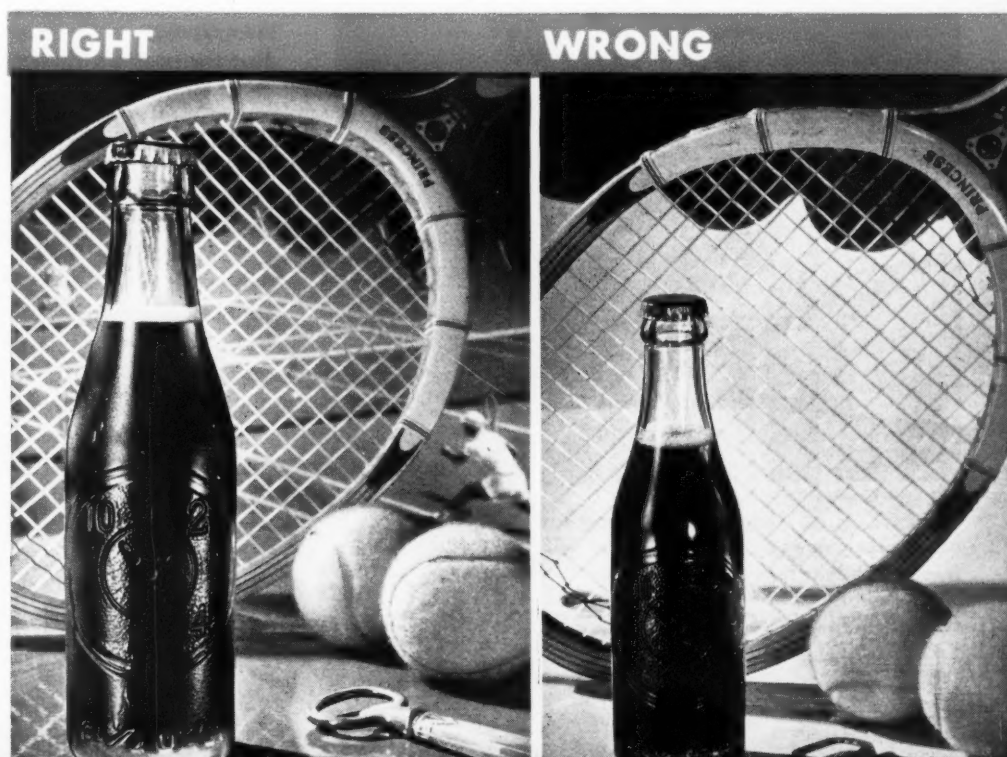
Display styles vary as widely as advertisement styles and it is almost as difficult to point to a trend in display pieces as it is to forecast which of the myriad feminine fashions promoted for fall will "take" in greatest numbers. Nevertheless, there are two types of displays now gaining in popularity—the out-sized, or twice-as-large-as-life, head and the figurine display. Examples of each are illustrated here.

While anything oversize is an attention getter, the twice-life-sized head of a pretty girl can be a real stopper. Pro-phy-lac-tic toothbrush, for instance, is

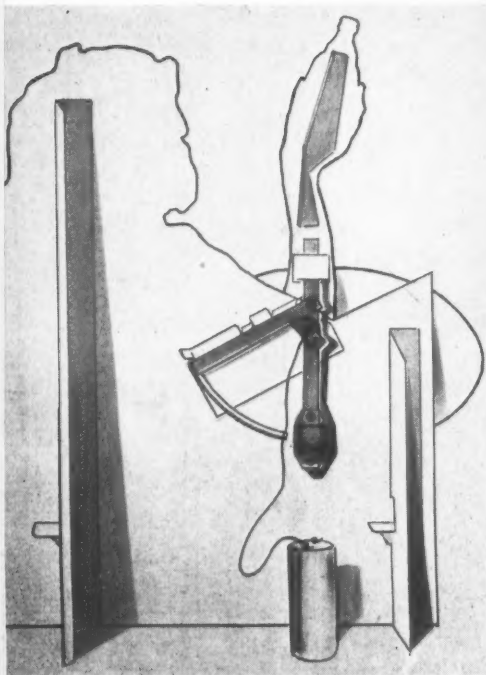


TWICE-LIFE-SIZE head is currently popular and effective. It puts heavy demands on layout and photography. Every hair must be in place; exceptionally heavy make-up must be used to eliminate the appearance of double-size pores.

LAYOUTS should be prepared in consultation with the lithographer and photographer, who know the tricks of the trade. Main elements in these two photographs are the same—but note how, with proper attention to camera angle and background detail, photo at left makes the soft drink dominate, while in shot at right (as laid out by client's agency) it is hard to tell what the display is selling.



ATTENTION GETTER is this experimental display that uses a simple mechanical device for motion. As shown by sketch of the back, the attractive girl waves a bottle of beer invitingly, her arm being propelled by a combination of gravity and impulses from a dry-cell battery.



using a pretty blond to promote its new Prolon-bristle brush.

In creating the oversized photograph, there is almost agonizing attention to detail. An out-of-place eyelash or eyebrow-hair cannot appear; heavy make-up has to be employed to eliminate the look of twice-life-sized pores (a photographer's model is not supposed to have pores like other people). While stylists assemble the costumes and jewelry for all photographs, the work of the stylist for an oversized picture is exaggerated, like everything else. Not only do the accessories have to be sized right so that they are not too attractive, yet attractive enough, but such things as seams and edges of clothing must be pluperfect.

The second "trend" has been to puppets or figurines—of cloth, of cork, of cardboard or what-have-you. As a change, puppets are interesting, amusing and fresh. But the pretty girl is here to stay. It seems that even a great majority of women are attracted to a pretty-girl display, although an authoritative survey on this point has yet to be made.

Cutout life-sized full figures have been used to great advantage as displays in grocery and drug stores, a photographed bin of related products attached to the display or a real-life one standing nearby. The model to be photographed, however perfect in dimension, can be made to look dumpy, off-side, angular or otherwise disagreeable through the slightest unwise angle of the photographer's lens. Somehow, taking a full figure is the true test of the photographer's art and sense of proportion.

Agency layouts frequently miscalculate relative sizes in objects. In the heat of producing an idea, there is a tendency to group the product with highly imaginative and suggestive props that further the idea but dwarf the package!



PUPPETS are increasingly popular subjects of direct-color displays. They offer novelty and the advantage of a continuing trademark. This Lenci doll has been used to identify the Griffin shoe-polish products ever since 1937.



LOOK SHARP to tell which are the display and which the actual figures. Comparison of the two shows the realism which can be achieved in this life-size display created by giving painstaking care to layout and photography.

Thus the display photographer has to look at the layout more to grasp its fundamental message and spirit than to follow it literally. A case in point was the layout showing a tennis racquet and other props of the sport, grouped with a soft-drink bottle. The size of the racquet would have canceled out the bottle had not a special wide-angle lens technique been employed to make the taller bottle in proportion, giving it dominant importance.

It takes a sense of adventure

When a lithographer highly skilled in this type of work is called upon to do the complete display job, from idea on, the result is apt to be more daring and unusual than the average agency plan, for the reason that the lithographer's experience and ability to experiment give him wider scope. Daring is based on sure knowledge and experience—knowing all the rules in order to break them.

The advertising-agency men, accustomed to looking at advertisements for magazines—close up—cannot always arrive at the perfect scheme for the presentation of its brain child display-wise. This is where the technical experience of the lithographer and his 15-ft. point of view should be seriously consulted by the advertising agency.

And it is precisely because agencies are not restricted constantly to this point of view that they tend to follow what has been done rather than risk failure in an expensive undertaking.

One company that dared to experiment was Dr.

Pepper. The firm announced a contest to determine the four loveliest young women to represent East, North, South and West in their large litho calendar and to be the featured figures in all their other display and direct advertising. Prizes were a week's trip to New York, complete with all the social and glamour high jinks, and a contract with the well-known Conover model agency.

An ordinary beauty contest is no longer considered a daring experiment, but judging from photographs and using inexperienced models as subjects actually was a daring departure for color display. The girls had not only to be styled to enact their roles as beauties of the East, North, West and South, but in one case the girl had actually to be taught how to smile. The girl who showed herself a natural was the one who had actually had a little modeling experience. Yet from the finished Dr. Pepper calendars or advertisements no one would dream that these were not professional beauties and experienced models.

Perhaps it takes a little adventure, too, for the agency or department to rely a little more heavily on the photographer and lithographic-art department—but it pays off. Nothing hurts so much as the finished reproduction of a beautiful head or figure gummed up by inept over-all layout or awkward juxtaposition of the elements. Clients will get their full display money's worth only when they take advantage of a coordination of the talents available to them through the photographer, the lithographer, the agency and the manufacturer, all working together and pooling their specialized experience to create the most eye-appealing and effective display.

CREDITS: All displays by Einson-Freeman Co., Inc., Long Island City, N. Y. Animation device used on experimental Krueger beer display by John G. Ruckelshaus Co., Madison, N. J.

GEORGE GREB recently realized a long-cherished ambition when he opened his own studio, specializing in creative color photography for the graphic arts, in midtown Manhattan. Previously—



before and after service in World War II as an OWI photographer - correspondent in the European area—he had established his reputation as head of the Creative Photography Dept. at Einson-Freeman Co., display photographers. His 33 years have led him from New York to Hollywood, to the *Chicago Tribune* and back to New York, where he has found his niche in the peculiar technical requirements of color photography

for large-scale lithographic reproduction. Few men are better qualified to speak on color illustration and advertising camera art from this revealing viewpoint.



SIMPLIFICATION of design for the new packages involved a series of steps. First, the diagonal stripes that steal attention are eliminated from new cartons, leaving large white areas. More trademark importance was achieved by strengthening trade-name italics and using a stylized dish to replace the old color illustration which tended to muddy up on manila stock.

A & P CEREALS

Sunnyfield packages meet demand for more forceful surface display on self-service shelves

Sunnyfield breakfast foods are sold exclusively by The Great Atlantic & Pacific Tea Co. throughout "A & P" stores alongside of competing nationally advertised brands. Thus it is necessary that Sunnyfield packages be given design treatment in keeping with today's demand for forceful package-surface display.

Since the Sunnyfield line "runs the gamut" of breakfast foods and is priced to sell at tremendous "turn-over," the first problem in planning the recently introduced new packages was to consider the mass-display potentials. The designer, therefore, based his program on the belief that utmost display value could be attained by simplification or cleanliness, and standardization.

While a first glance at old and new packages indicates a complete change-over, an analysis reveals that essentially, the basic elements and layout of the old packages have been retained. The only element completely eliminated is the diagonally striped pattern on the sides

and edges of front and rear panels. This pattern, with its activity, served only to steal attention from more important units of the package and caused confusion. The larger mass of white space afforded by discarding the stripes thus provides the first step toward a cleaner-appearing package. Units of design gain a better "setting" and the package as a whole appears larger on the shelves. Elimination of the stripes, which were being printed in a Ben-Day screen, also eliminates the former disadvantage of uneven color tone, due to the varying amount and pressure of ink which is applied to the Ben-Day screen.

Further refinements were made on other elements of the family design to present all-over improved containers. The trade name "Sunnyfield" received subtle alterations, by more oblique handling of the italic lettering, the presentation of rounder letters and elimination of flourish curlicues. All this is an aid to more rapid reading. The characters have also been made heavier

ADAPTABILITY of the basic design to the whole line of breakfast foods is shown here. With minor alteration to indicate puffs or flakes, one drawing of dish can be used for all packages. Same colors in reverse provide contrasting design for tray package.



to stand out more forcibly for increased display value.

Product-name lettering was completely changed in style. Since most competitive brands use plain block lettering, it was decided to break away from tradition and establish a new style with serif letters as bold in character as the old, but slightly larger. While a bit more elaborate, the limited use prevents such lettering from becoming hard to read and it serves as a relief from a possible monotony of the much used sans-serif styles.

One-color printed

Since, of necessity, a cheap manila carton stock is used in packaging low-priced items, the full effect of extra colors is not always obtained. In fact, in the case of the photograph of the cereal and fruit on the old Sunnyfield package, a somewhat muddy appearance was the result. By elimination of one color (yellow) the cost of production was reduced, while the effectiveness was increased.

In order to continue the sought-for cleanliness and simplicity of design, a more definitely stylized illustration is used. While less realistic in appearance, the stylized dish does not lose identity. At the same time, one drawing with a slight alteration to indicate puffs or flakes within the dish is used, rather than necessitating a complete change in art work for each package. By this simple repetitive emphasis the standardization effect has been vastly increased. In addition, the use of the dish on the sides of the container further emphasizes its trademark importance.

The use of a more open-faced type for the smaller descriptive text on the sides makes for better printing and greater readability. While still easily read, it allows for more leading and increased emphasis of cleanliness.



CELLOPHANE BAGS for packaging breakfast foods are equally effective with the new design.

The tray pack which contains 10 small packages of variety cereals is a pick-up of the cereal containers in color scheme and design, but creates a definite contrast by utilizing the colors in reverse. The all-over red background forms an ideal setting for the 10 packages and makes a definite unit of them while establishing an eye-catching alternating pattern on the stocked shelves in retail stores.

The basic design is also readily adaptable to Sunnyfield breakfast foods in printed cellophane bags.

Thus it is felt that this design program, based on simplification, has been successful. It not only attains the utmost in display value, but reduces production costs.

CREDIT: Designs, Robert Neubauer, Inc., Southport, Conn.



NEW PACKAGES. Sleeve labels of light-weight board stock, varnished and five-color printed, convey idea of quality and individuality. HQZ brand name receives strong, emphasis in yellow, green and red against the gray-green background coloring.



OLD PACKAGES. Trade name was completely lost in a welter of multicolor stripes and black background coloring was entirely unsuitable to toiletries products of this particular type.

COSMETIC FORESIGHT

The cosmetic business was one of the most sensitive to changing conditions in the immediate postwar period. Many small companies are not yet over the hump.

The success story of HQZ Distributors, Inc., San Francisco, which had the courage to face the facts early and to replan its merchandising and packaging to meet these new conditions, will therefore be an inspiration to many companies, both large and small, still hiding their heads in the sand.

For 15 years HQZ had been distributing a line of hair preparations. In the spring of 1942 this company, like all others in the toiletries field, was faced with procurement problems complicated by the fact that Rolf Conwell, president of the company, had a commission in the Naval Reserve and answered the call to the colors.

Mrs. Conwell stepped into his shoes to run the business, joined by Hal F. Ford, whose experience in the automotive field fitted nicely into the picture as sales manager. This team made splendid progress, achieved

a sound financial structure for HQZ and extensive dealer and consumer acceptance. A condensed line of the most profitable items, consisting of a 25-cent and 69-cent hair oil, a 25-cent hair luster and a 49-cent liquid shampoo, sold in volume through beauty shops, drug, variety and department stores, despite obviously inconsistent pricing and packaging that was seriously outmoded—probably, as Mr. Conwell himself admits, because everything sold during the war years.

But as early as the fall of 1945, when Mr. Conwell returned from Naval duty, it was apparent that a change was taking place in consumer buying habits. People were simply not reaching out to grab everything they were offered. Shipyards, factories, various supply depots and service installations began closing down or started to consolidate. Army and Navy disintegration proceeded apace and the great readjustments in population, income and living habits were making themselves felt.

As a comparatively small operator, in intimate touch with the trade, HQZ was quick to feel these changing conditions.

"Various expedients were tried in 1946 to compensate for the increasing difficulty in achieving wartime sales

figures," says Mr. Conwell. "Deals, promotions, varied media advertising—all were attempted and, tragically, all fell flat on their faces because the fundamental errors of adjusting *merchandising* and *packaging* to postwar preferences had been entirely disregarded or evaded.

The more difficult it became to meet quotas and volume, the more obvious it became to us that a comprehensive analysis of good things and bad things on the HQZ selling ledger was an absolute necessity. No one in the firm really knew to whom they were ultimately selling HQZ products."

Under the sales manager's leadership, the entire sales staff stopped selling and started gathering facts. A questionnaire was given to each representative and consumers of every sex, age group and economic level were interviewed on the streets, in stores, in their homes, to find out who actually did buy preparations of the types made by HQZ, what they bought, what they paid for

**HQZ has the courage to face facts,
comes up with a red face—and a new
merchandising-packaging program
that boosts sale from 10 to 45%**

them and what they thought of the HQZ line and packages.

"In all candor, we came out of this survey with red faces, feeling that in our complacency we had drifted as lotus eaters too long," said Mr. Conwell. "We learned that huge wartime sales figures had deluded us into believing that we had extensive consumer acceptance, whereas in large measure this acceptance resulted from unavailability of competitive brands. It was found that consumer price preferences only roughly approximated HQZ fair-trade prices and that in a number of cases HQZ actually built up doubt in the consumer's mind by selling our shampoo at too low a figure. Most questionnaires indicated that buyers considered the prevailing HQZ packages garish, not bespeaking quality, and such as to encourage concealment rather than display on store shelves or in the consumer's home. Above all, where HQZ had attempted to solicit a class trade, we learned that, by and large, our products were being purchased by young married women in very moderate circumstances, usually with one or two children and invariably without the means to patronize beauty shops."

Where did these young women prefer to buy? In-

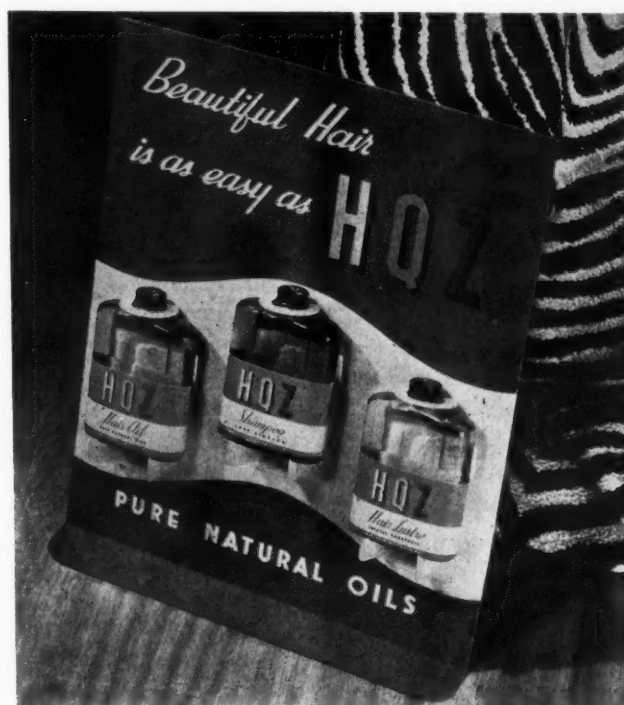
variably at a point where they could satisfy a considerable part of their total needs at one point, at low or minimum prices, and where there were boys usually provided at market centers to help carry purchases to parked cars.

These facts were given to professional merchandise counsel for aid in their solution. A price structure was established to meet consumer 25-cent and 50-cent preferences, yet to provide better quality and quantity than it was felt competition offered. Jobber and retailer discounts were worked out to provide interesting profits and to encourage volume buying.

The packaging problem was laid before a West Coast designer, who, through the analysis of market conditions and the relation of HQZ packages to their competitors on the shelves and consumer preferences, was able to develop a group of packages which it was felt emphasized the quality and value of the products. The garish colors of the old label were softened. The black background was replaced with flattering gray green. Instead of the HQZ brand name being submerged in a welter of multicolored stripes, where identity was lost, it now stands forth emphasized in striking contrast. The varnished, five-color, sleeve-type label conveys the idea of quality, efficiency and purity.

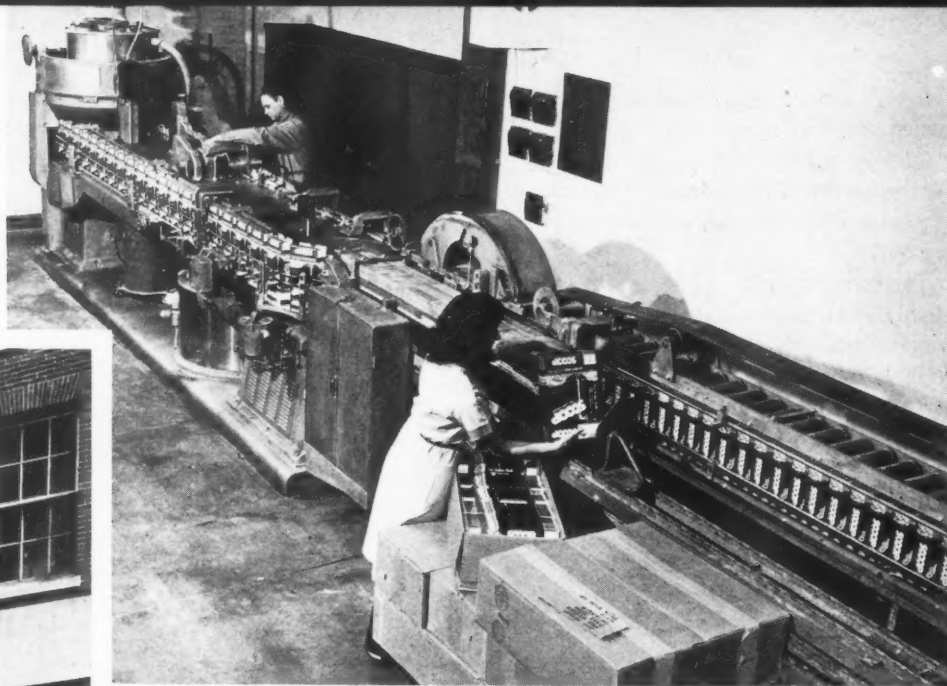
The designer supervised the entire production of the labels from sketches to finished sleeves. An important saving achieved, too, was the new arrangement of labels so that two and one half times as many labels as before may now be printed from a given sheet.

A paralleling project in- (Continued on page 194)



DISPLAY MATERIAL was completely redesigned and adapted to the new package theme and colors. These die-cut, easel-type counter cards hold the three products in their actual packages.

SO BIG it couldn't be delivered any other way, machine is shown here being hoisted by a derrick through a window at The FR Corp.'s Bronx plant.



OVER-ALL VIEW of the 43-ft. machine shows attendant in center foreground placing cartons in hopper. Cartons are automatically opened, bottom sealed, coded, passed under the enclosed rotary filling head at far left and returned through the top sealer and compression unit in the right foreground.

SCOOP'S FILLER

A new type of volumetric machine packs and seals detergent powder in glue-end cartons as fast as 200 a minute—dust free

A new carton-filling machine which combines unusual speed with simplicity of operation is demonstrating its advantages at the plant of The FR Corporation, makers of "Scoop," a soapless detergent for household use. The big, 43-ft. machine makes use of familiar principles, refined to a streamlined, continuous-motion operation, with the added feature of provision for direct control. The first models were installed several years ago in the plant of a large soap company where they were kept "under wraps" for the duration. The FR installation marks one of the first postwar deliveries.

"Scoop" had a war origin. The manufacturers make photographic chemicals and supplies in a compact and efficient plant in The Bronx, N. Y. Their war activity in producing and packaging such materials for military use gave them an experience which qualified them to develop and market a modern household detergent. They began producing this for the market in 1945 (see MODERN PACKAGING, Aug., 1945, p. 119).

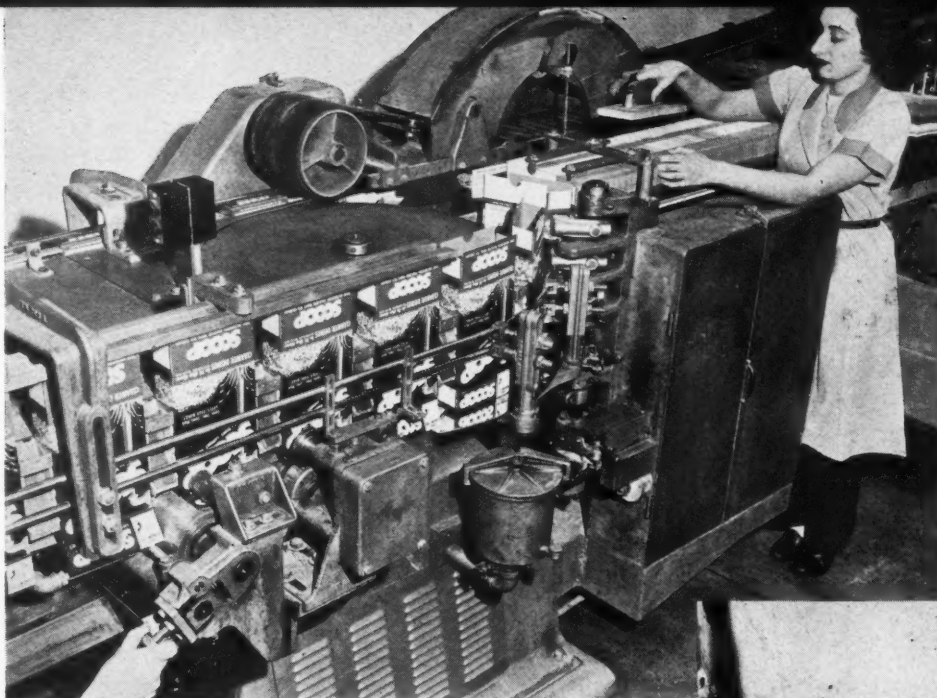
The filling operation of such products often runs

squarely into the problem of dust control. "Scoop" is no exception. Previous to the current installation, equipment was used which did not satisfactorily solve the dust problem. Further, the old equipment required specially-trained personnel and occupied considerable floor space. The new machine permits round-the-clock operation with untrained personnel and occupies only a third as much floor space.

"Scoop" has another characteristic. Its alkaline action would play havoc with an ordinary paint job—so the entire machine is nickel plated.

The package is a full-seal-end folding box with a glue lap on the side panel. These boxes are precision made and the machine handles two sizes—1 lb. and 6 oz.

Boxes are fed in from a chain conveyor and the feed is accomplished by means of three vacuum cups reciprocally operated (this, incidentally, is the only reciprocal motion in the entire machine; all other movement is continuous). The chain conveyor advances a bit at a time as the vacuum cups pull a carton off the feed line.



FEEDING unit close-up shows empty cartons moving from right to left. Vacuum cups pull cartons open and they are pushed in position and held in place as they go through coding device and bottom-gluing mechanism.

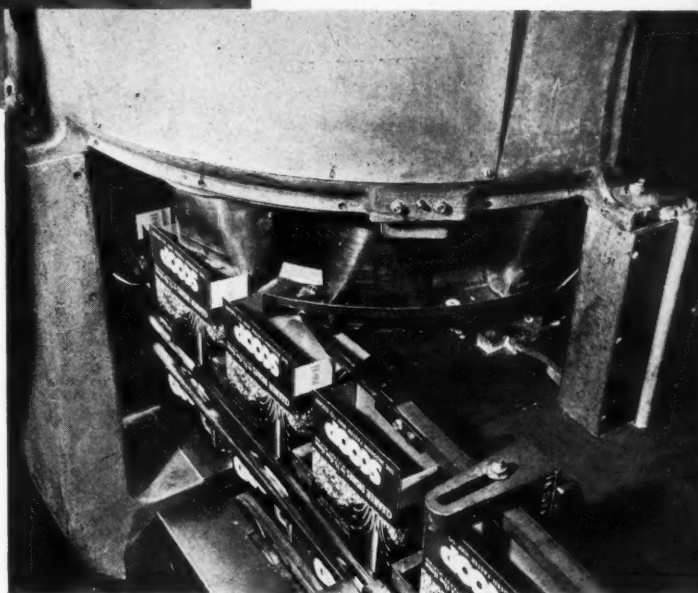
The vacuum cups affix themselves to the side panel of the folding box and the pull opens it up. The box takes its place in the moving line, held in position by blocks properly spaced on a moving belt. The box has a "press here" pouring device and the cartons are fed in upside down in order to form and seal the box properly.

Each box passes through a coding mechanism and the code marks are printed "blind" on an outer flap. Immediately following this comes the gluing mechanism, the rollers of which coat the flaps at the base in readiness for forming the end seal. The glue reservoir, on the floor level, maintains a 135 deg. F. temperature. The mechanism returns all excess glue, insuring a neat and clean operation. The top flaps, of course, remain open, and as the folding carton moves along the conveyor line to the filling heads the adhesive is given ample time to set; the only pressure applied is by means of "rails" adjusted to prevent any irregular vertical motion.

The filling mechanism is entirely enclosed in order to retain all dust from the product. This really amounts to a built-in dust hood, through which passes an air current at 1,000 cu. ft. per min.

The rotating filler has 12 heads and uses the volumetric filling principle. These filling heads move deftly into place after a "plow" moves one of the top flaps outward so that the filler is in direct contact with the box proper. The filler cups "telescope" by way of adjustment to regulate the fill. The adjustment is made simply by means of setting a regulator wheel. (The photographs were made with the housing removed to permit observation of the working parts.) The rotating filler head is equipped with a "no-carton, no-fill" device, so that if one of the spaces on the moving belt happens to have no carton the trap of the corresponding filling head does not trip.

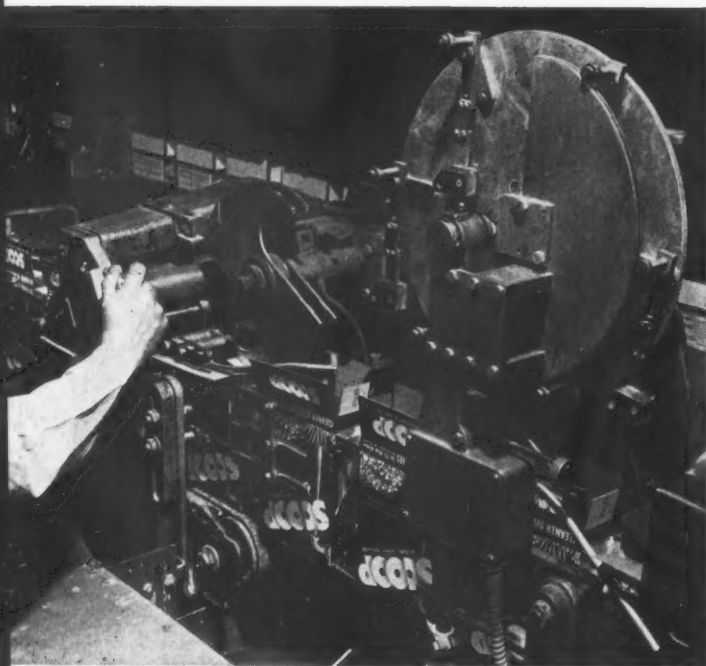
Below the belt which carries the filled cartons on around is a toggling or vibrating device which may be cut in or out at will for purpose of settling the contents.



FILLING UNIT has 12 heads which rotate clockwise in synchronization with entering cartons. Ordinarily completely enclosed for dust control, housing has been removed here. Air removes dust through hood at top.

The filled cartons, still carried by the circular band belt and held in place by the "blocks," now pass through a vacuum dusting device which was engineered and added to the machine by the maintenance crew of The FR Corporation. The purpose of this dusting device is to clean off any minute quantities of the detergent powder on the flaps of the folding boxes that might prevent the action of the glue and interfere with proper setting. This is used only when the air conditions require it.

Proper fill is assured by a mechanism which consists of a vertical rotating wheel equipped with weights that are connected with a kick-out mechanism to throw out of line any boxes improperly filled. These weights are so adjusted that as the wheel rotates, one drops into the filled carton. Any deviation from the proper height causes the "kicker" to act; the box is thrown out and emptied into a receptacle where the contents are carried



VOLUME DETECTOR is a rotating wheel with weights which drop into each carton as it passes, checking the level of fill and kicking out any improperly filled. At right is a vacuum dusting device to insure that flaps are clean before cartons move on to left for final sealing.

back by the air current to the floor above and emptied again into the filling hopper. The efficiency of the machine is such that the amount of the detergent powder thus salvaged is almost negligible; the plant engineer estimates it to be about 30 lbs. per day, for an 8-hr. minimum run of 50,000 to 60,000 lbs.

The top-closing operation is similar to that of the bottom. The gluing mechanism has one roller which is larger than the other and it moves more rapidly, thus affording a cleansing action which prevents excess glue from being applied. Preparatory to entering the compressor unit, the filled boxes pass through a "turn-around" which faces them so that they move on the conveyor belt of the compressor with the broad face of the carton at right angles to the direction of movement to the conveyor belt. The 27-ft. length of the compressor unit affords ample time for the glue to set before the cartons are removed for inspection, check weighing and hand packing in the shipping containers.

The machine has a capacity of 180 to 200 cartons per min., as compared with a maximum rate of 75 per min. on other similar mechanisms. The FR Corporation has cut the speed down to 106 per min. in order not to get too far ahead of operators who pack the shipping units.

CREDITS: Machine, Stokes & Smith Co., Philadelphia. Folding boxes, Gardner-Richardson Co., Middletown, Ohio.

NEW MUSTARD PACKAGE OUTSELLS OLD BY 10%

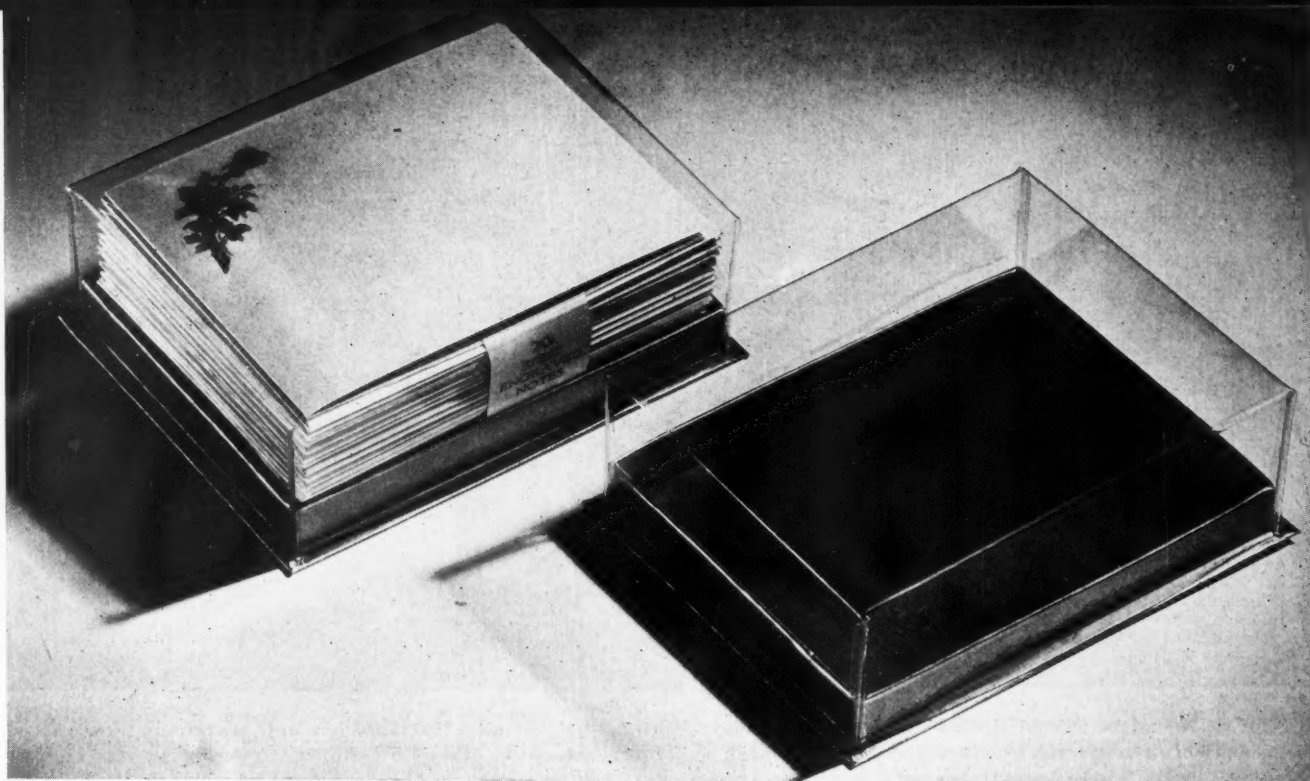
To test the effectiveness of their recently redesigned packages, J. W. Beardsley Sons, Newark, N. J., put their new mustard packages in 200 New York City stores and kept all old labels in 200 comparable stores in the same territory. At first the new labels moved a little slower than the old, then took a decided upswing, showing average sales increases of 10% in all stores where only the new packages were being carried. The company believes this is a strong indication of the importance of better package display for today's merchandising.

Beardsley's redesign program includes its whole line—codfish, dried beef, peanut butter and mustard. Principle design change was moving an identifying red stripe to the left and incorporating it as part of a distinctive letter "B" for Beards-

ley, thereby broadening display areas. Elimination of green outline permits printing in two colors—red and blue—instead of three.

CREDITS: Design, Jim Nash, New York. Labels, Douglas S. Colyer, Newark, N. J. Lithographed cans, American Can Co., New York. Carton, Wm. W. Fitzhugh, Inc., New York.





CORNERS of the acetate lid used by J. T. Murphy Co. on stationery box require only $\frac{1}{16}$ -in. lap for positive seal by electronic method, improving appearance and reducing cost. No adhesive is required, eliminating hand operation.

ELECTRONIC BOX STAYER

**First commercial machine demonstrates a split-second way
to seal acetate sheet through controlled high-frequency heat**

Until recently there was no practical way to seal cellulose acetate in the formation of package structures except by the laborious application of a solvent to the seams—usually a hand operation. Last fall techniques for the successful heat sealing of acetate film were described.¹ Now a simple machine for the sealing of acetate in sheet gauges by the magic of very high frequency radio waves has been developed and used commercially for the first time on a run of 11,000 transparent stationery boxes for the J. T. Murphy Co., Philadelphia.

The advantages demonstrated in the pilot run appear to make this a development of importance to every maker and user of transparent boxes.

Corner seams on box structures are only $\frac{1}{16}$ in. wide and almost invisible; large "ears" on box blanks are unnecessary. There is obvious economy of material and improvement in appearance. Sharp corner creases have almost a beaded effect, giving the structure greater

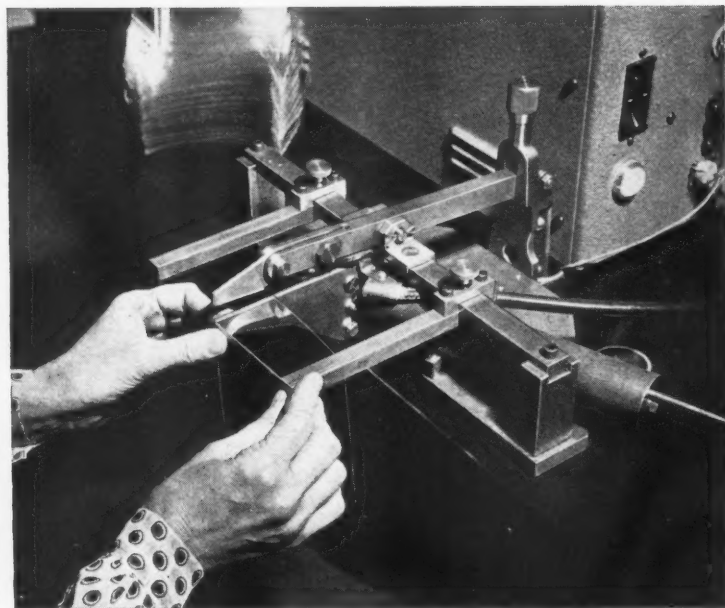
rigidity and permitting the use of lighter-gauge material. Because the electronic "deep heat" actually fuses the edges together, the seal is foolproof—as strong as the material itself. The simple mechanism practically eliminates human error; in the 11,000-box pilot run, with an inexperienced operator, rejects were virtually nil, whereas in previous manufacture of the same box by conventional methods the box maker had rejects as high as 18%. A seal is made in $\frac{1}{4}$ second and the box is ready for stacking immediately upon removal from the machine. Distortion of the box shape sometimes caused by the cementing operation is eliminated. There are no odors or after-effects such as some solvents show.

All this is accomplished by a simple jig about 18 in. long, consisting of adjustable guide bars that position the box and sealing jaws that come together when activated by a foot pedal. A metal cabinet about the size of a suitcase contains a standard electronic generator which supplies all the power; it plugs into any

¹ See "Heat Sealing Acetate," MODERN PACKAGING, Sept., 1947, p. 152.



MACHINE consists of adjustable sealing jaws and guide bars and a portable cabinet containing high-frequency power converter. Operator starts by taking die-cut, pre-creased blank from the stack at the left.



POSITIONED on adjustable bar and stationary lower electrode, blank is ready for upper electrode to descend to seal the first corner. The material heats only at the narrow corner and only while the jaws are pressed together.

light socket and draws a maximum of 800 watts—about the same as a household iron.

Operation is equally simple. As shown by the sequence of pictures, the operator takes a die-cut, pre-creased blank and positions it on one of the two fixture bars and the base plate of the sealing jaws. She presses the pedal and the jaws clamp firmly on the $\frac{1}{16}$ -in. corner overlap. Due to an automatic timer (adjusted according to the gauge of material being handled), the high-frequency current comes on—after the proper pressure has been automatically attained—and shuts off after the precise fraction of a second necessary to make the weld. The jaws then open and the operator simply flips the box around on the fixture to bring another corner into position, repeating the operation until all four corners have been sealed. The box can be handled with rapid motions, because once the high-frequency current has done its work the seal cannot be pulled apart.

The operator sits comfortably at her work, which takes a minimum of physical effort. A good operator can attain maximum speed of 24 seals per minute after short practice. In practical production, output of box halves with four sealed corners is expected to average at least 300 per hour from a single machine.

Such are the peculiarities of high-frequency current that in spite of the high temperature developed within the acetate, the outer surfaces remain cool. The electrodes are not heated by the high-frequency current. Heat is created throughout the thickness of the material in the area of contact by the action of the radio waves in causing molecular friction. This would bring the whole mass of material to the melting point—were it not that the electrodes in contact with the surfaces remain cool. The electrode blades actually chill the surfaces so that

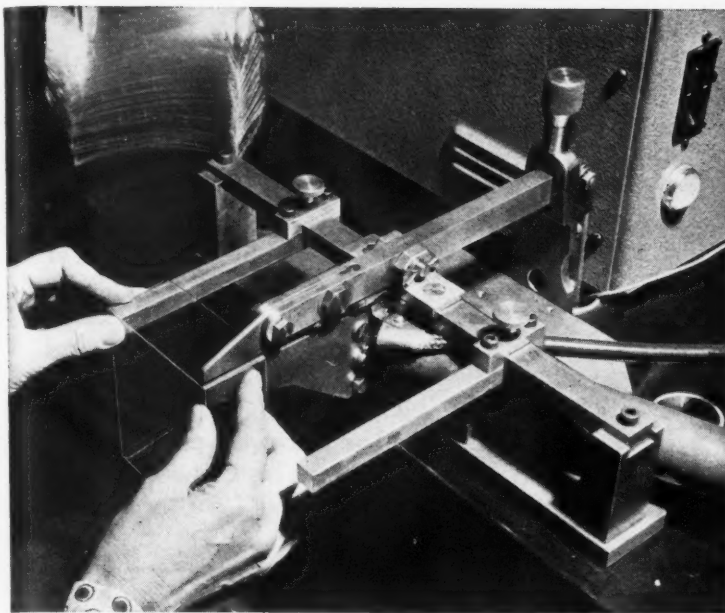
they do not melt and become sticky. That is one secret of the success of this machine. The material welds and flows together throughout its cross-section except at the outside faces, which remain unaffected.

Microscopic studies of cross sections show clearly the difference between electronic sealing and ordinary heat sealing. Under the microscope, the electronic seal is one homogeneous mass of material throughout, the lines of demarcation between the two sheets disappearing completely in the sealed area. With a heat seal, the lines of demarcation are still apparent right through the sealed area, which shows merely an adhesive tack between surfaces.

This interesting new method is the culmination of research started several years ago in the laboratories of the Eastman Kodak Co. The first boxes, sealed on laboratory equipment, were displayed at the Packaging Exposition in Philadelphia a year ago and the details were made available to interested equipment manufacturers. A Philadelphia firm specializing in the mechanical application of electronics, working in cooperation with a leading manufacturer of electronic power equipment, has now produced the machine used on the Murphy boxes and is going into regular production to supply the packaging field. The price is expected to be around \$1,250.

The electronic-sealing principle itself is not new to packaging. The first "sewing machine" types of continuous-roll sealers were brought out nearly 10 years ago and have been used in the sealing of thin-gauge, flexible thermoplastic films such as Vinylite, Koroseal and Pliofilm.

The sealing of flexible films was relatively easy. But when the same techniques were tried on rigid acetate



FLIPPED AROUND to left-hand mandrel, box here is being sealed on second corner. Operator must be careful to keep finger away from the upper electrode only during the $\frac{1}{4}$ second while the current is on. Timing is automatic.



FINISHED in only 10 seconds, another box is added to the rapidly growing stack. First production run indicates that speed of operation is approximately 300 boxes per hour, with rejects practically non-existent.

sheet, they did not work. The plastic was either overheated or under-heated; it was uncontrolled. As a result, acetate was popularly considered as being unsuitable for high-frequency sealing.

The problems were these: (1) the rigid sheet would not "give" to the sealing blade as the film did and, therefore, needed a perfectly machined blade for evenly distributed pressure; (2) the thicker materials had far less latitude between melting and boiling points; (3) tuning the current to the load had to be far more critical.

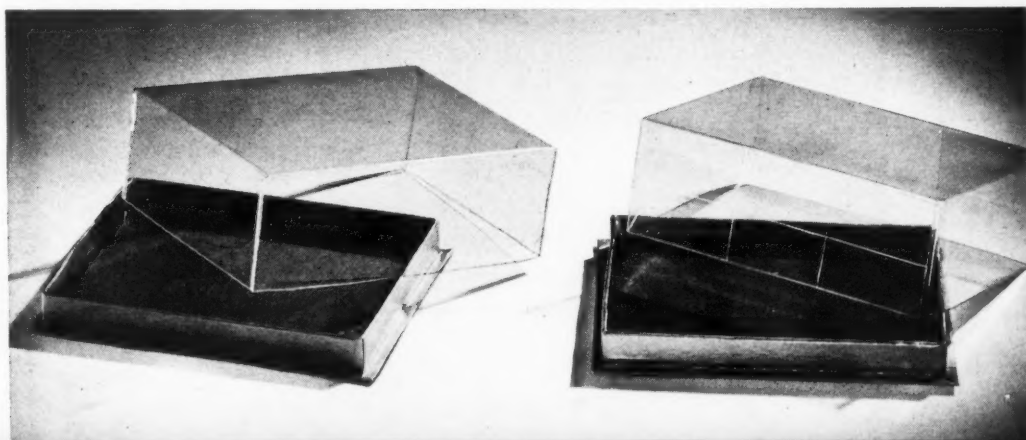
The Eastman laboratories went quietly to work on these problems, however. They found the exact combination of pressure, temperature, time and dimensional accuracy of the electrodes required by rigid thermoplastic sheet. Finally, it was a matter of properly matching the load, or tuning the electronic circuit within very close limits. The proper values were established by a series of closely controlled experiments. When the electrodes were properly designed and the load matched, no difficulty was encountered in producing a permanent weld in acetate sheet.

A 200-megacycle generator was found practical be-



CONTROL of sealing jaws is effected by a foot pedal. Pressing the pedal lowers the upper jaw, exerts exact pressure and then turns on current. Current turns off automatically after set interval and jaw rises on release of pedal.

COMPARISON of the new (left) and old boxes. Note excess of material in previous cover, made by folding method without adhesive. New cover is more rigid, although it has no overlap of material anywhere except at the almost invisible corner seams. Base of Murphy box is paperboard, with gold paper cover and maroon liner.



cause at this frequency it is possible to apply sufficient power to produce an almost instantaneous seal without the danger of arcing encountered at lower frequencies such as 27 megacycles.

It is claimed that the new machine is readily adjustable in tuning to produce the same results on any sheet from 0.0075-in. gauge to 0.020-in., the sealing jaws being changed by a micrometer adjustment. The Murphy boxes are 0.0075 in.

As presently set up, the machine when used as a corner stayer will handle any box up to a depth of 5 in. Other dimensions are unlimited, being merely a matter of equipment that will permit the guide bars holding the boxes to be extended to the required length. In addition to the corner stayer, the manufacturer of this

machine expects shortly a cylindrical mandrel which will be interchangeable as the lower electrode, permitting the welding of the vertical side seam on cylindrical containers. His line will also include a bar-sealing machine with a 7-in. electrode which will be able to make an edge seam of any length by over-lapping welds.

Box suppliers are expected to be the major users of the new machine, but it is also pointed out that its compactness and simplicity of operation make it attractive to package users who require large numbers of transparent boxes and may prefer to fabricate their own. This would permit a great saving in shipping cost and storage space. The box user could purchase flat, die-cut, pre-creased blanks from his supplier and set them up only as they (Continued on page 202)

ANOTHER ELECTRONIC BOX SEALER

At press time, announcement had just been made of a second commercial machine for the electronic sealing of transparent containers. Several other equipment makers are reported to have developments under way. Developments in this field apparently are going to come very fast, now that the ice has been broken.

Machine is actuated by two black buttons on base. It will weld two corners of a rectangular box simultaneously; or, by change of electrodes, make a circular seal at base of cylindrical container.



A pilot model of the machine illustrated here is being used by one of the largest manufacturers of transparent containers, sealing ends on cylindrical boxes. According to the machine makers, straight and circular seals up to a maximum total of 12 in. may be made by suitable variations in the electrode arrangements. In the construction of rectangular boxes not more than 4 in. deep, two corners may be welded simultaneously.

The machine will handle plastic sheeting compounded from either cellulose esters or vinyl chloride, in gauges from 0.005 to 0.020 in., it is said.

The manufacturer claims as a feature of this machine its simplicity of construction and operation. It eliminates all transmission lines. Since there are no tuning adjustments, untrained help can quickly learn to change the set-up from one job to another in a few minutes time, it is said.

The unit consists of a high-frequency generator, an air press and adjustable electrodes. The control panel includes a filament and power switch. Red and green lights indicate proper functioning of the machine. A jack is provided for a service man's meter. A timer controls both pressure and heating intervals.

The operation, with a rectangular box, consists merely of sliding the open side of the box over the arms appearing at the base of the machine and pressing the two black buttons below.

The power control is located between the lower electrodes and adjustment is made with a screw driver. The over-all dimensions of the machine shown are 14 in. wide, 23 in. deep and 28 in. high.

CREDIT: Machine, W. T. LaRose & Associates, Inc., Troy, N. Y.

COLORFUL in its orange-and-blue design, the waxed fibre can with metal ends has been made completely liquid-tight so that there is no leakage during overnight defrosting. Anybody on a milk route now can have tree-ripened California juice daily.



DOORSTEP ORANGE JUICE

Liquid-tight fibre can offers new means of distribution for frozen fresh juice, delivered daily by the milkman

Frozen fresh orange juice is not a new product, but both the package and the method of distribution make the Cal-Grove brand noteworthy in this field.

The packaged juice will be distributed nationally to dairy companies, to be delivered to the housewife's doorstep daily along with the milk. By the time breakfast is ready, the juice will be thawed and ready to serve . . . fresh as the day it was squeezed.

The package is the new type of waxed fibreboard can with crimped metal ends and this marks its first use, so far as is known, for a frozen liquid product.

Damerel-Allison Co., Covina, Calif. the producers, wanted a package that would: (1) be as easily and speedily handled production-wise as tin; (2) be able to withstand the same physical treatment as a bottle of milk in transit from dairy to point of delivery; (3) permit frozen orange juice to thaw for use as fresh juice.

For added eye appeal, the wax-impregnated fibreboard body is directly printed in three colors (orange, blue and black). This carton should be treated just as a bottle of milk. In other words, it should not be placed in the freezing compartment of the refrigerator, but in the regular section where it will thaw slowly (if not already thawed on receipt) and be ready to serve in a few hours.

Cal-Grove believes it will be able to merchandise its new product door-to-door nearly any place in the country at a figure below what it costs the housewife to buy

fresh oranges at the grocery and squeeze them herself.

The product was first introduced experimentally in a similar package a year ago, but difficulties due to the lack of experience in packing a liquid in this type of container immediately arose. The waxing of the body was too light and leakers appeared after the packages reached the distribution point. Difficulty also was experienced with the body side seam. All of these difficulties, the company states, have now been completely overcome and the package—re-introduced with a new surface design—is liquid tight at all points.

The package, which contains 14 oz., is quick frozen by the tunnel method. Cans are brought down on a conveyor to filling valves which are in continuous operation. Juice is already slush frozen as it flows into the containers. The automatic closing machine seams on closing ends at the rate of 60 containers a minute. The plant is geared to production of 10,000 gals. of juice, or 80,000 packages a day and the company hopes to double this production in 1948.

The frozen product is shipped in regular refrigerated railroad cars, iced and salted down the same as in the handling of similar frozen products. Dairies, for the most part, order in carload lots and with the exception of 200 to 500 cases which they store in their own storage facilities, the bulk is stored in public warehouses.

CREDIT: Containers and closing equipment by American Can Co., New York.



DESIGN



BAKER'S NEW PACKAGES

Walter Baker's four grocery-store chocolate items, long-established leaders in the chocolate field, have undergone a package modernization program in a direct effort to aid grocers by providing better shelf-display values. While the packages have acquired an up-to-date appearance, this has been achieved without changing the traditional and familiar character of the packaged product.

The greatest revision is in the package for Chocolate Chip, which changes from a brown to a basically yellow box with brown "chips" scattered over its surface and lettering predominantly blue. Principal changes in the other packages have to do with copy. For example, Premium No. 1 unsweetened chocolate no longer has the many lines of copy on the face panel, but merely a concise description of the product. Coloring for "German's Sweet" is the same, but trade name is now on the package face. Displayed together, the packages now form a distinctive family.

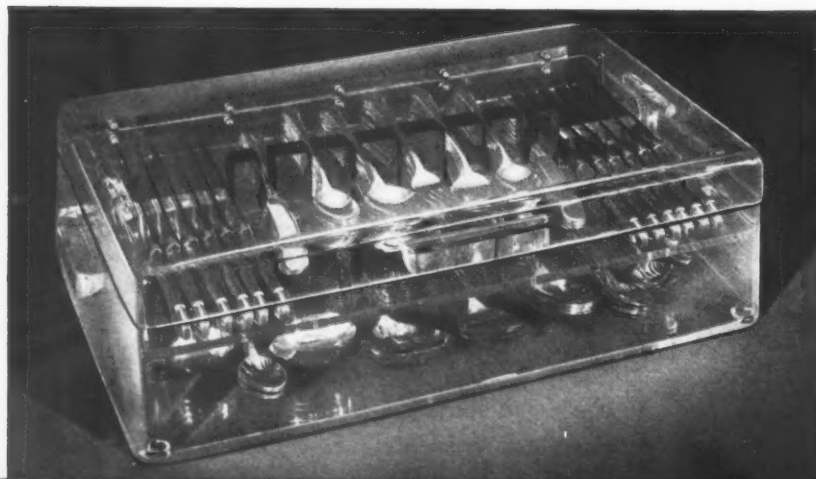
ACRYLIC SILVER CHEST FOR DISPLAY OR HOME USE

International Silver Co. has adopted this deep-drawn transparent acrylic box to facilitate the display of sterling silver flatware and for sale, especially to brides, as a unit complete with silver. The entire lid and body are made from a single

sheet of material. The lid is then cut away from the body, thus insuring a perfect fit of the lid to the base. Base and lid are then hinged together. A separate tray, also made of transparent acrylic, fits into the box, making it a two-shelf chest to

accommodate a complete silver service. All the bridges that hold the silver are covered with velvet which has been treated so that the silver will not tarnish. The velvet covering also serves to prevent the silver from sliding around within the chest. The box base has acrylic handles attached to either side for lifting. Front handle is engraved with the company name, the only identifying mark on the chest.

CREDITS: Box, Steiner Mfg. Co., New York. Plastic material, Plexiglas, Rohm & Haas Co., Philadelphia.



HISTORIES

LABELS FOR TRADEMARKED AND PRIVATE-BRAND SELLING

In redesigning labels for the line of paints and paint products manufactured by Lasting Products Co., Baltimore, Md., one of the major factors to be considered was the company's method of distribution. The products are sold under the "Lasting" name and for private-brand use. Distinction between the two was provided primarily through color differences and also through label copy.

For the trade-named products, the designer used a bright red and blue label with a center panel of yellow printed in black and red. Here the trademark, a reproduction of the world globe, is prominent. Blue, orange and black is the color scheme for the private-brand labels. Product description is bold in center white patch.

CREDITS: Design, Frank Condon, New York. Labels, Maryland Color Printing Co., Baltimore, Md. Containers, Crown Can Co., National Can Co., Continental Can Co., all of Baltimore.



MEN'S TOILETRIES FROM AUSTRALIA

It is significant that packaging trends in other countries frequently coincide with trends in the United States. Shown here is a family of packages for a new line of men's toiletries recently introduced by Frederick Stearns & Co., Division of Sterling Drug, Inc., Sydney, Australia, under the trade name "Country Club." There are seven different items in the line and containers include glass jars and bottles, collapsible tubes and paperboard cartons, all related in design.

Essentially masculine in treatment and coloring, the labels and cartons feature a natural wood-grain effect. Against this background, the trade and product name are reverse printed in white. The trademark design, a horseman silhouetted against the background of a country club, gives

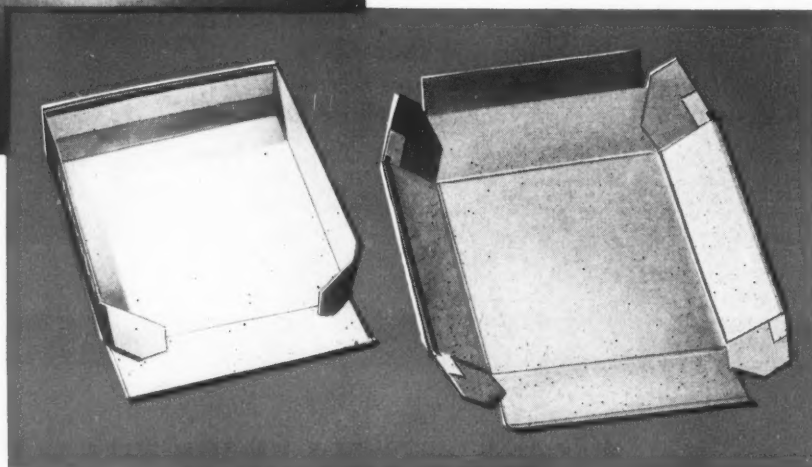
the packages an outdoor atmosphere and adds to their masculine "personality." The only container on which the trademark does not appear is the collapsible tube, which is packaged in a folding carton carrying out the package theme.



BOX SETTER-UP



DOUBLE THICKNESS of side walls on both cover and body give unusual strength to this full-telescope folding box made of 20-pt. board. The boxes are formed by high-speed machine and blanks are one-color printed in chocolate brown against white.



PARTIALLY SET UP body (right) and cover show the double thickness of side walls and the reinforcing tab at corners of the body. Stock is manila-lined chipboard.

Hand operations still have their place in certain phases of packaging, but if the experience of the John Horne Co., Evanston, Ill., candy-bar manufacturers, may be taken as a criterion, there can be no doubt as to the advantages of automatic machinery for setting up covers and bodies for full telescoping folding boxes used as counter containers.

Late in 1947, this company installed a pair of high-speed machines which automatically set up and glued folding blanks to form telescope boxes which hold two dozen of its popular Coconut candy bars. In order to place the units in operation with all possible dispatch, the two machines, weighing 18,000 lbs., were flown from the manufacturer's plant at New Haven, Conn., via American Airlines, then brought from the Chicago airport to the Horne factory in the company's own trucks. Within 50 hrs. after their arrival at the plant, the box-forming machines were placed in actual operation.

Installation of the automatic units, which are to be supplemented later with two more machines of similar type, marks a complete change-over from the method

formerly used by the Horne company in setting up its counter display boxes. For some time, a display-type folding box with die-cut top which opened up to form the back panel was employed. Setting up this unit for filling was a hand operation. Later, when the decision was made to convert to automatic setting-up of counter boxes, an interim container was adopted—a two-piece telescoping box with double side walls on both the covers and bodies. This unit, although not requiring a supplementary paperboard sleeve for additional shipping protection, as had the display box, also had its disadvantages.

Setting up the interim container by hand required the labor of eight girls. This required a large amount of space in the plant and also created a serious "traffic" problem because of the necessity of trucking blanks to the workers and taking away the finished bodies and covers for storage. Executives of the Horne plant

point out that the general confusion created by this large-scale hand operation was reflected in reduced production and efficiency all along the line.

In contrast to the intermediate container, which required a large blank and included two flaps which were pre-glued by the supplier, the new counter box is economical in its use of paperboard. To begin with, it consists of 20-point bleached manila-lined chipboard, as compared to 26-point patent-coated board on the earlier container. In addition, because of the type of construction employed, the new blank is considerably smaller, effecting a saving of around 10% in the amount of board required.

This new folding box accommodates 24 of the Coconut bars, which are wrapped automatically in opaque, rotary-printed, 25-lb. glassine wrappers fed from continuous rolls. The box is so designed that the body has a double thickness of paperboard on each of the four side walls, giving it unusual strength. Both the body and cover are printed letterpress in a single color (brown), the cover having five panels printed and the body four printed panels.

Printing of the name "Coconut" on two adjacent side walls of the cover is inverted, so that it will read properly when the cover is removed and placed beneath the body for counter display of the bars.

In the John Horne installation, one of the automatic machines is setting up bodies while the other is confined to covers. However, the latter unit can also set up the double-walled bodies, if required, simply by adjusting

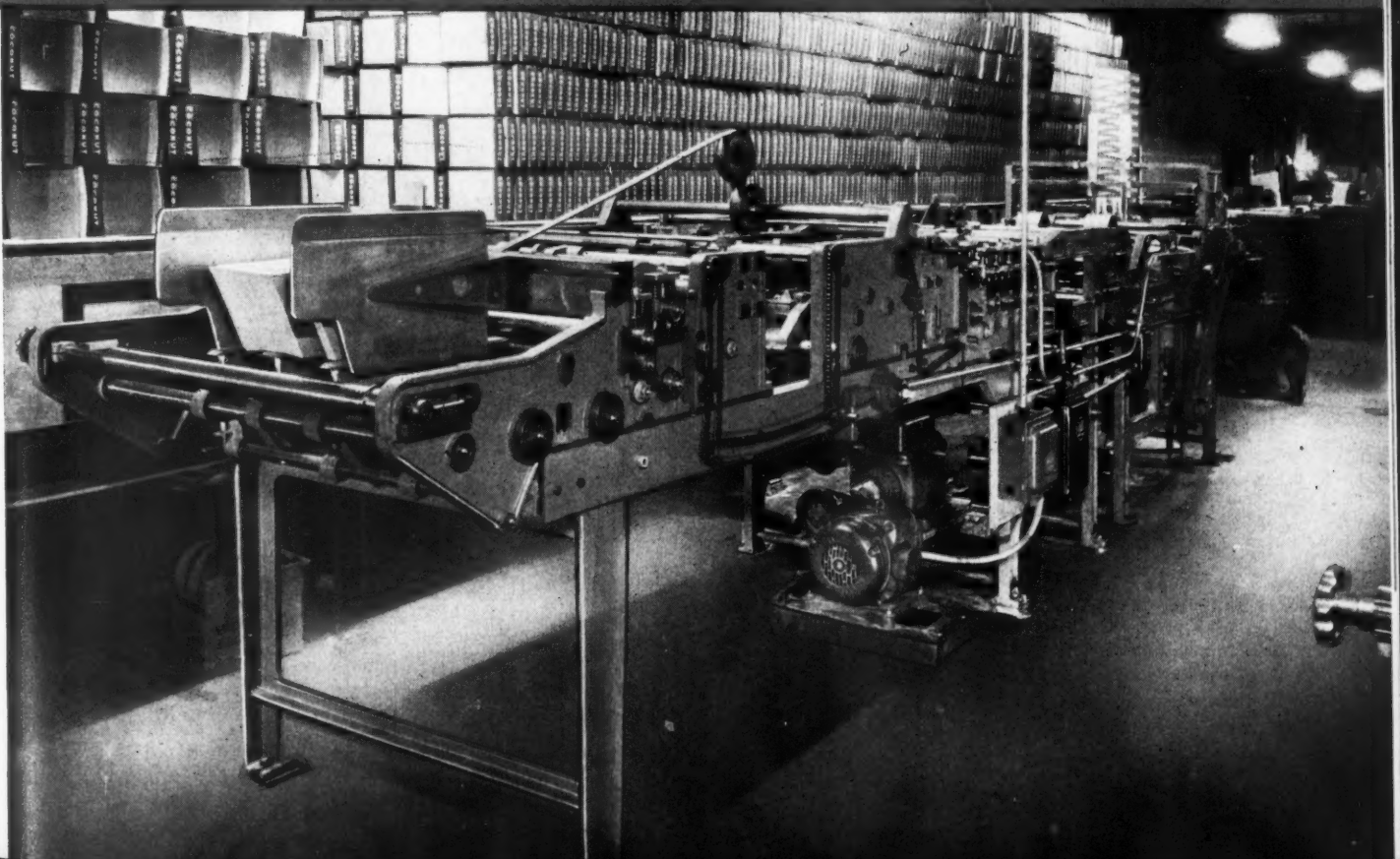
it so that the turntable mechanism becomes operative.

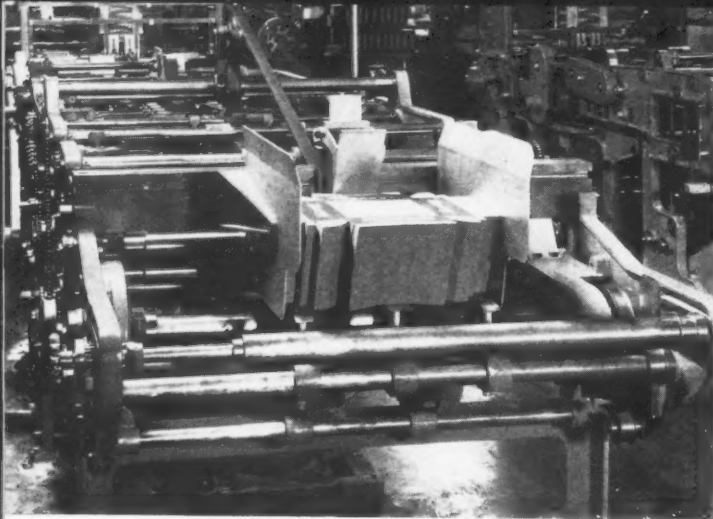
In the production of the bodies, the blanks are conveyed through a standard gluer which folds over and seals the double side wall. Next the blank moves to a turntable, where an upper and lower plunger grip it and rotate it 90 degs. in a clockwise direction. This action permits the end panels to be glued without interrupting the straight-line progress of the blank through the machine. After leaving the turntable, the body is realigned on a chain conveyor. Passing on toward the delivery end of the machine, the blank is engaged by two rotating cams which force the reinforcing flaps out of the way of the gluing mechanism. Gluing of the end panels and breaking of the score on these flaps are accomplished in quick sequence and the blank moves on to the forming die.

At the delivery end of the unit, the forming die rises vertically, shaping the blank around the mandrel and giving the body section its final form. In order to improve the stacking of the finished bodies, the machine is so designed that alternate bodies are jogged to the right and left, causing them to interlock as they accumulate in the stacking chute and making it easier to remove and store them for future use. The action of the companion machine is similar in the formation of the covers, except that, since only the end walls are of double thickness, the turntable is not operated and the blank goes all the way through the unit without being rotated.

There are two safety controls installed on these box-

OVER-ALL VIEW of set-up machine operating on box bodies. Flat blanks feed in at end nearest camera. Operation is integrated with a standard gluing unit which folds over and seals double side walls.





INTAKE END of set-up machine showing blanks in position. Shown at right is a similar machine which makes covers for the boxes.



TURNTABLE mechanism, located midway of machine, permits formation of double-walled ends without interrupting straight-line movement of blank through machine. Blank shown has double side walls already folded and glued, and is about to be rotated 90 deg., clockwise, before continuing to final gluing and forming operation. Rotation is effected by upper plunger which presses blank against lower plunger (beneath blank) and then makes a quarter turn.

DELIVERY end of body-forming unit, showing die, mandrel and stacking chute. Note how alternate bodies are jogged right and left so that they interlock for more secure stacking.

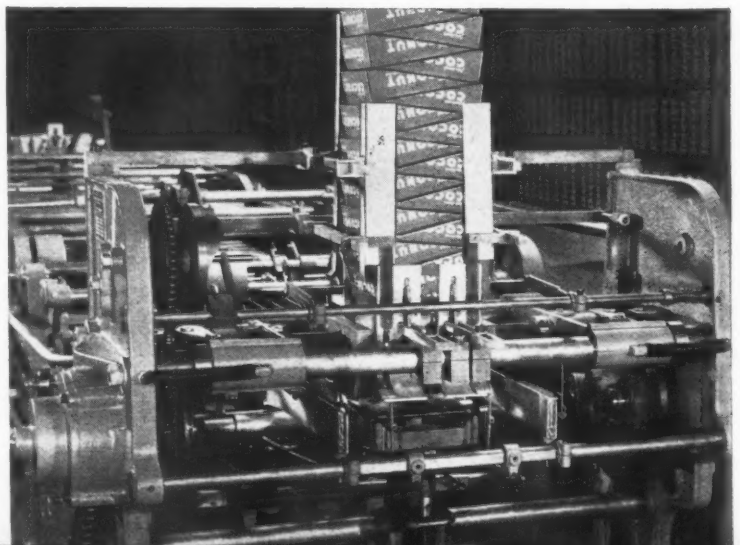
forming machines, in addition to the manual controls. Actuated by microswitches, these controls are located just ahead of the turntable and ahead of the forming die and will automatically stop the machine in the event a blank becomes jammed at either of these points. Although the units are capable of operating at speeds as high as 60 or more blanks per minute, they are being run slower during the breaking-in period.

Under the packaging program being carried out by the company, display-type boxes now being used for other items in the Horne line will be converted to the telescoping style with double side-walled bodies, adapting them for setting up with the new machines. This will eliminate the paperboard sleeves now used to strengthen the display boxes. When the complete battery of four automatic machines is in operation, one man will be required to service and feed blanks to the equipment and a girl to remove the finished covers and bodies from the stacking chutes.

Ultimately, the new equipment will be setting up folding boxes for three different types of Horne candy bars, including special boxes containing 48 bars packed for the vending-machine trade. With the four-unit battery in operation, all box requirements will be handled with very few interruptions for resetting the machines, thanks to standardization of container blanks. When required, change-overs to accommodate different package sizes can be made in an hour or two by plant service personnel.

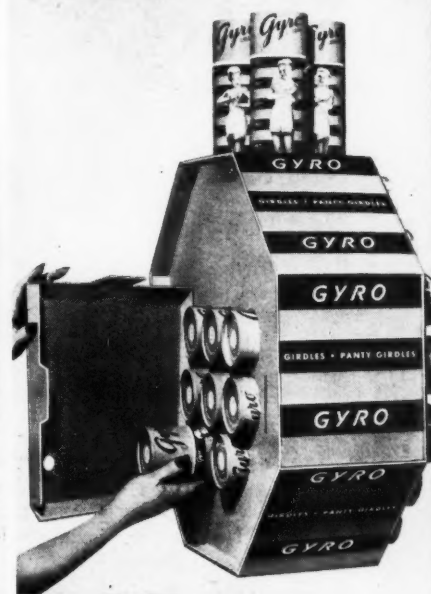
The company is also planning to step up its packaging operations further by conveyorizing delivery of the finished covers and bodies to the packing tables, as well as the transport of the filled containers from this point to where they are placed in shipping containers. The wrapped bars are hand packed into the bodies in three layers, with paperboard separators, and the covers applied. Sixteen of the telescoping counter boxes are packed in corrugated shipping containers in which they leave the Horne plant.

CREDITS: Obaco automatic box-forming machines made by Quinnox Corp., Wilton, Conn., and leased through American Coating Mills, Elkhart, Ind. Box blanks, American Coating Mills. Coconut-bar wrappers, Traver Corp., Chicago, and Milprint, Inc., Milwaukee.





SPIRAL-WOUND package has beaded ends and telescope opening. It is printed in black and fuchsia with photographic illustration of product. The size, color and style is printed on outer circular label.



LIKE BULLETS, packages are placed in slots of hexagonal counter unit carrying out striking color scheme of the package. Additional stock is put in back of display. These units are given free with initial order of 2-doz. girdles. Unit commands attention on counter, is easy for salesmen to sell.

Packaging in the textile field is progressing inline with predictions of a year ago.* Sensational in the corsetry field are the new fuchsia-and-black, perfumed packages for Formflex's new Gyro girdles and panty girdles, together with the striking hexagonal counter unit for display in corset departments.

The new package was promoted first by R. H. Macy & Co. in full-page New York newspaper advertisements for Dec. 26 selling (incidentally, a day which stores claim is one of the biggest corset days of the year). More than 7,000 were sold at 11 Macy counters on Dec. 26 and 27 in spite of the 26-in. snowstorm on the 26th, the heaviest in New York's history. In one week Macy is reported to have re-ordered three times and on the strength of this success 155 leading stores in other parts of the country put in orders almost immediately.

The new package is a spiral-wound telescope tube 7 in. long and $2\frac{7}{8}$ in. in diameter, printed in two colors with black-and-white photographic illustration. The tubes fit, bullet-like, into the hexagonal display unit which accompanies, free of charge, the first order of two dozen. The face of the unit shows 16 of the girdle packages, each marked for size and color on the ends of the boxes. Eight more packages are stocked in the back of the display. The garments are inserted in the tubes by

hand, folded once and rolled. A perfumed disk in the bottom of each package imparts a fragrant scent to each garment. A package insert describes features of the garment and how to care for it.

The new package is naturally an expense, but according to Formflex, it more than pays for itself in additional advantages. It provides an attractive sales unit, immediately identifies the merchandise, offers greater frontal area for promotion of brand name, is easy to handle, immediately ready for the customer to take home and keeps the garment factory fresh until it reaches the consumer. Buyers like it because it simplifies stock taking and completely protects the merchandise from soilage. Salesmen like it for its eye appeal.

More than 600 stores are now carrying it, having placed their first orders within two or three weeks after the initial promotion. Re-orders continue to pour in.

CREDIT: Design of package and display, Louis H. Koster, New York. Tube, Niemand Bros., Inc., Long Island City, N. Y. Counter display, Wrigley Bros. Co., Inc., New York. Lithography, Lutz & Sheinkman, New York.

* See "Textiles," MODERN PACKAGING, June, 1946, p. 93.

FACTORY-SEALED



PROTECTION to work gloves in storage and handling is provided by the new seal-end carton. Torn open along perforated lines and creased, the carton becomes attractive display unit. Old carton (background) is lock-tab type.

COMPARISON of six new cartons (foreground) with 12 old ones in background shows improvement in recognition value and legibility. Use of pressure packaging with the new sealed cartons enables company to pack 15 types of gloves in only six sizes of boxes.



GLOVES

Packagers now using cartons with lock tabs top and bottom who may have problems similar to those of the Riegel Textile Corp. will be interested in the improvement this company has achieved recently by the adoption of new factory-sealed display cartons for its Wagon Brand work gloves.

The new Wagon Brand cartons are seal-end style blanks with a patented glue strip which can be opened, torn along perforated lines and creased to serve as a counter-display dispenser at the retail counter.

The company states that the new packages not only provide a stronger container that is more sturdy for handling and protected from pilferage, but represent a saving of 15% in board and require only six sizes of cartons to do the work of 12 formerly used.

Riegel formerly packaged all work gloves in one-dozen cartons with lock tabs top and bottom. This type of carton had a tendency to belly if the goods were not put in loosely. Conversely, gloves put in loosely did not ride well in transit or storage and often jiggled down so that the fingers became crumpled.

Work gloves are sold to small outlets through jobbers, to chain stores, or to large industrial firms who supply them to their workers. In all cases the lock-tab carton has disadvantages. In the small outlets, gloves are kept in the cartons on the shelf and a pair taken out by the clerk when purchased. It is not only a slow, annoying job to open and close such a carton, but with so much opening and closing the tabs are soon broken. In chain stores and industrial plants, the work gloves are not sold out of the box, but are stored in them. These users objected to the flabbiness of the lock-tab box and to the ease with which employees could open a box and help themselves. The pilferage problem is also a concern of the jobber, not only from the monetary loss, but from customer complaints on receiving a box with only 10 pairs of gloves instead of a dozen because someone along the line has helped himself and reclosed the box.

New packaging for Wagon Brand gloves reduces pilferage, saves 15% of board, permits six boxes to do the work of 12

Because they are sealed when filled at the factory, the new cartons reduce pilferage. The gloves stay in position and ride well, since they can be packed under pressure. The packing under pressure also enables the use of fewer boxes, because certain types may be squeezed a little more, other types a little less, so that the 15 types of gloves now all fit into six boxes, whereas 12 sizes were required before. In outlets where counter display is required, the lid of the new cartons can be lifted up and quickly closed, or it can be bent back and the carton used for display.

There are additional economies in carton design, since only three sets of plates are required to print the six carton sizes. Fewer sizes also mean greater running economy when the manufacturer buys boxes.

All of these improvements are the result of a cooperative study made by the carton supplier and Riegel's production and advertising departments of the materials-handling phases of work-glove packaging, as well as merchandising features. Other advantages include more efficient inventory control by the user, both in cartons and shipping cases, and neater stock keeping for the retailer.

At the same time the new carton style was adopted, the typography of the design was analyzed for heightened effect in mass display and legibility of stock identification.

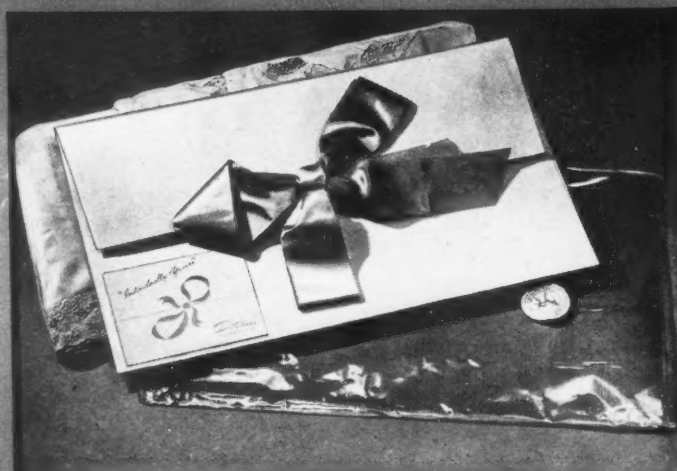
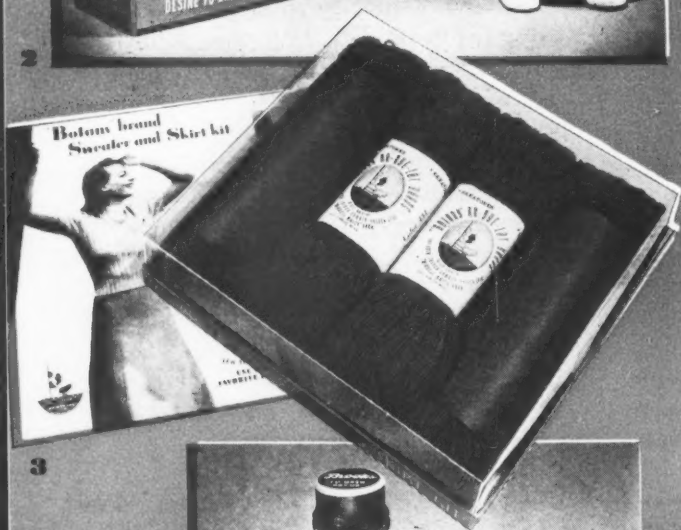
The cartons are closed by an automatic case sealer and a high-speed packing line is geared to the mechanized operation in the Riegel plant. All six sizes are adapted to the same machine and the seal-end flaps are designed to permit a change-over time of only 10 minutes.

CREDITS: *Cartons, Container Corp. of America, Chicago. Automatic sealer, Container Equipment Corp., Newark, N. J.*



SEALING is an automatic operation. All six boxes are handled on the same machine, which has been designed to permit a change-over time of only 10 min.

Modern Packaging Pageant



1 The trend toward packaging of soft goods is exemplified by this envelope pack for the "Dutchess" lingerie set—matching gown, slip and panties. Fabric-textured paper envelope is enclosed in a cellophane envelope. Paper, Stevens-Nelson Paper Corp., New York. Label and insert, Gainsburg-Shack, Inc., N. Y.

2 Folding carton die cut to resemble a circus cage forms appropriate container for "Sippo," a children's drinking cup shaped like an elephant. A fold in the bottom of carton is die cut to hold elephant in place. Design, Edwin Berger Associates, New York. Carton, Aeme Folding Box Co., New York.

3 Another indication of the way soft goods are taking to packaging is this Botany gift box of paperboard with a transparent rigid cellulose acetate hood inside the top cover, revealing wool yarn for sweater and fabric for skirt. Box, Shaw-Randall Co., Inc., Pawtucket, R. I. Acetate, Celanese Corp. Lumarith.

4 Brooks "Old Original" catsup and barbecue sauce are re-appearing in their fluted private-mold bottles, slightly altered in design from those formerly used, enabling greater speed in filling, capping and labeling. Foil label is featured on barbecue-sauce bottle. Foil label, Reynolds Metals Co., Richmond, Va.

5 The metal snap-on cap of glass container for Servit Foods tea bags is designed with coin slot in the center, for re-use as a savings bank after contents are removed. Jar, Anchor Hocking Glass Corp., Lancaster, Pa. Cap, Sterling Seal Co., Erie, Pa.

6 Flents eye shield, normally packaged in a folding carton, uses this luxury box covered with mica-finish paper to provide a de luxe model for sale at a higher price.





Illustration on inside cover enables its use for display. Design, Ben Lewis, New York. Cover paper, Hughes & Hoffman, New York. Box, Clover Box & Mfg. Co., Inc., New York.

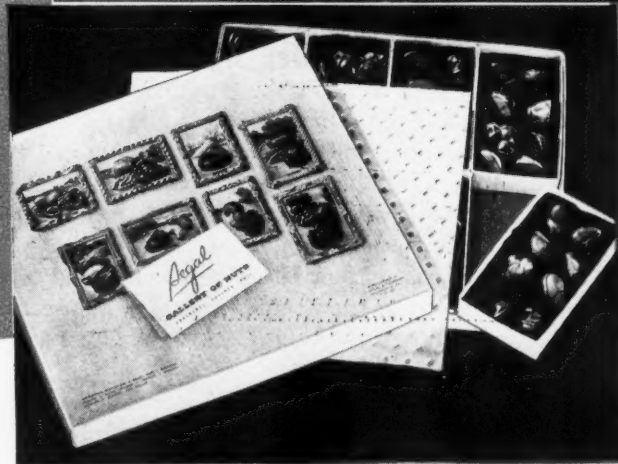
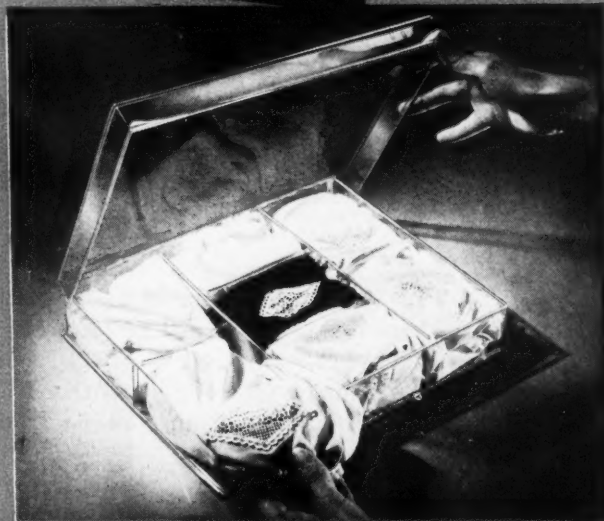
7 A shiny black hat trimmed with veiling and bright cerise ribbon opens to reveal two miniature crown bottles of Prince Matchabelli "Easter Bonnet" perfume. Box, Karl Voss Corp., Hoboken, N. J. Bottles, Swindell Bros., Inc., Baltimore, Md.

8 New streamlined carton for Swift's Quick Arrow soap (foreground) emphasizes the familiar arrow in bold relief to add life and light to the trade name. Higher grade board and revised size give carton a clean, quality look and aids in display stacking.

9 This compartmented transparent cellulose acetate box is used by Rosalind Underwear Co. for merchandising a gift set of seven panties, each in a different color and sporting a pun on each day of the week—"Moms-day," "Dues-day," etc. Box, Rapid Cutting Co., Brooklyn. Acetate, Celanese Corp. Lumarith.

10 Cover paper for Segal's "Gallery of Nuts" candy box is high-relief embossed and loose wrapped over the box cover to preserve embossing. Design resembles a series of framed pictures on a wall. Wrap, Sherman-Oddo Press, Philadelphia. Box, Walter P. Miller Co., Inc., Philadelphia. Pad and cups, American Lace Paper Co., Milwaukee, Wis.

11 Four-color offset labels, each illustrating a different product, applied to the face of a one-color printed folding carton enable All Plastics Corp. to use the same carton for each of its novelty night lights. Design, Guy Hodges, Inc., New York. Label, Advertising Literature, Inc., New York. Carton, Trenton Folding Box Co., Trenton, N. J.





NAILED CRATE 19 by 16 by 9½ in. holds 24 heads of lettuce without bulge. Specially developed for Western Growers' Assn. test, this crate may solve one pre-packaging problem by giving proper protection to produce with greater ease of handling and a lower over-all cost.

WIREBOUND CRATE is new; makes a lightweight, sturdy pack when wrapped around two corrugated trays of cauliflower. For comparison purposes, a part of the produce which was used in these test shipments was not pre-packaged.



PRODUCE SHIPPERS' TEST

Sometime during the early morning hours of last Sept. 4, a fan-equipped refrigerator car was shunted onto a siding alongside the produce packing shed known as Molus Station, near Gonzales, Calif. When the car rolled out Eastbound on the evening of the 6th, it carried the first of five history-making loads of fresh vegetables.

This was the culmination of more than two years of intensive study at the Experimental Institute of the Western Growers Assn., seeking to determine how the members of that dominant Arizona-California group might best capitalize on the current strong trend to self-service sale of pre-packaged produce.

So far, practically all pre-packaging had been done by distributors or retailers at the receiving point. Economics and logic argued that it would be better to do the trimming and packaging at the shipping point. Yet, except for rapid air-borne shipments* and certain items like spinach, grower pre-packaging of vegetables to be shipped from the West Coast to the East had not been too successful.

Keenly aware of the value of merchandising their own brand name via the package (they need only look

at such nationally promoted names as "Sunkist" and "Florida Gold"), the Western Growers group set out to find what techniques might be devised that would overcome the difficulties and provide packaging at the field level which would carry vegetables to the retail store and hence to the housewife's kitchen in satisfactory condition.

Incorporated in the five cars from Molus Station—consigned to retail outlets in Boston, Columbus, Cincinnati, Detroit and Minneapolis—were all of the revolutionary ideas worked out by Al Martin, director of the WGA Experimental Institute, who already has established himself as the nation's outstanding authority on pre-packaging at the grower level. Among the innovations designed to preserve quality in the package were:

1. Germicidal and fungicidal treatments.
2. Pre-cooling, washing and drying.
3. A new type of crate to eliminate the evils of the "bulge" pack.
4. Elimination of crate and top ice.
5. A new method of carloading through the use of fan-equipped refrigerator cars which insure uniform low temperature and ventilation.

* See "Produce by Air," MODERN PACKAGING NOV., 1945, p. 96.



Closely observing and cooperating in the experiment were representatives of the Department of Agriculture, of packaging-material suppliers, of retailers and distributors and of the railroads. Detailed reports were made by the consignees of shipments in each of the five cities.

Each car was loaded partly with pre-packaged produce and partly with non-packaged, so that a comparison could be obtained. The unit packages of cellophane and Pliofilm included various types of ventilated and unventilated constructions, as shown by the tables herewith. Each car contained approximately 40% lettuce, 20% celery, 20% carrots, 10% broccoli and 10% cauliflower, and four cars had from three to five crates of Brussels sprouts which were processed, pre-packaged and packed by the Santa Cruz Artichoke & Sprout Growers Assn. The first car was shipped to the S. A. Gerrard Co., Cincinnati; the second to the Great Atlantic & Pacific Tea Co., Columbus; the third to the Kroger Grocery & Baking Co., Detroit; the fourth to D'Arrigo Bros., Boston, and the fifth to Gamble-Robinson Co., Minneapolis. Approximately 300 stores sold the merchandise shipped in the five cars.

All of the interested parties had observers at the unloading points. The report that follows has been com-

plied by MODERN PACKAGING from information made available by the Western Growers Assn. and by the Du Pont company, which had representatives of the Technical Service of its Cellophane Division on hand. The report pulls no punches. It cites both advantages and disadvantages. It should be noted that these facts and comments were contained in reports originally designed only for internal distribution within the various organizations; they have been made available for publication here for the first time as a service to the produce and packaging fields.

Details of shipments

The fan-equipped refrigerator cars used were of the latest type put into service.† At the present time there are 9,839 fan cars of various types in operation. There are on order 25,595. There is a total of about 130,000 refrigerator cars in use today.

In the cars used in these shipments, the fans are driven from the axles of the car when the car is moving and can be connected to outside motors for operation when standing, if desired. The cars have herringbone-type racks for the bottom and ducts up the side walls. The fans move the air up through the bunker ice and out over the load. No top icing or package icing is required; all refrigeration comes from the bunker icing. The cars were thoroughly pre-cooled and Western Growers made certain the cars had reached low enough temperatures before they allowed them to move East.

Lettuce, celery, broccoli and carrots were packed in a new type of nailed wooden crate developed by the Wooden Box Institute.† Eliminating the bulge pack, it has outside dimensions of 19 by 16 by 9½ in. and in-

† See "Produce Packaging," MODERN PACKAGING, Dec., 1947, p. 106.

Five experimental carloads illustrate research findings of Western Growers in pre-packaging at the shipping point



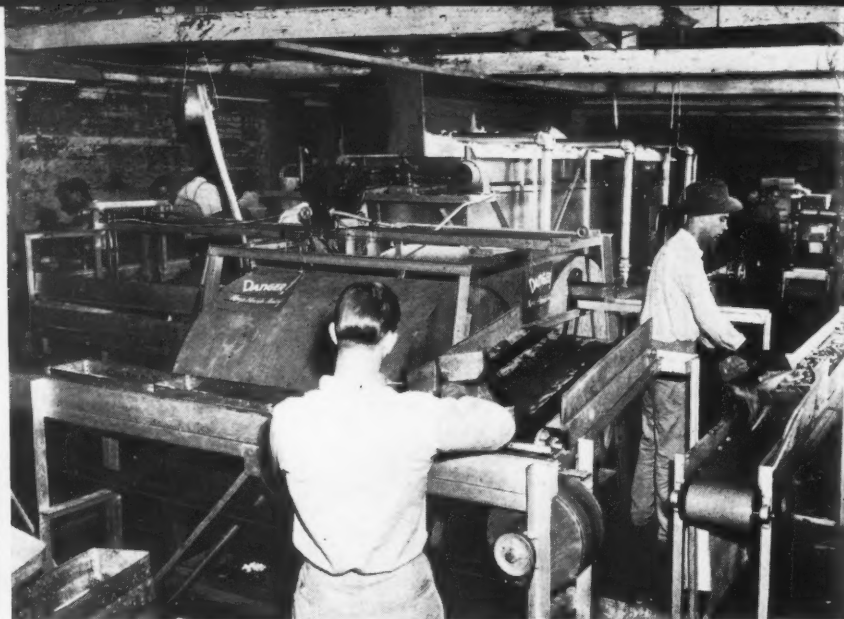
INTERIOR OF CAR shows method of loading, six high, with stripping below and between crates creating channels for unrestricted movement of refrigerated air, circulated by fans from bunkers. There was no top icing and not a single damaged or shifted crate in entire 5 cars.

CARROTS all were snap-topped and pre-packaged in 1-lb. bags measuring 6 by 12 in., made of either cellophane or Pliofilm, with top folded over and a saddle label stapled over fold.





LETTUCE was pre-packaged in two 7-by-8-in. sheets of 75 NF Pliofilm, fin-sealed on four sides by a special machine devised by WGA which handles 15 heads per minute.



PROCESSING includes a combination washer-pre-cooler and germicide (background) and a centrifugal dryer (foreground). Produce emerges at 46 deg. just 4½ min. after entering at 64 deg. Here carrots are being emptied on conveyor belt that carries them to packaging line.

side dimensions of 18 by 15 by 8¾ in. The cover embodies four slats each 1/7 by 2¾ by 19 in., with two cleats 1/2 by 1¾ by 14½ in.

A special wirebound crate was developed for cauliflower† in cooperation with the Duff-California Co. Known as a tray crate, it wraps around two corrugated paperboard trays which hold the cauliflower. The outside dimensions of this crate are exactly the same as those of the nailed crate.

These crates are considerably smaller than the crates conventionally used for bulk produce and are more convenient to handle. A great deal of thought went into their development, for it was realized that a proper shipping container was vital to the success of this whole program. Not only was it necessary to eliminate the bulge type of packing, which damages so much produce, but there was an economy motive. WGA researchers realized that if they could reduce the number of types of crates and standardize them on one, two or three sizes, it would mean a considerable saving in the manufacture of box shooks, would save lumber, make the crates easier to load in the car and result in a substantial saving to the shipper. It is estimated that in regular use the cost of the nailed lettuce crate should not be in excess of 22 or 23 cents, including lid and nailing. Therefore, as "half" crates for lettuce, two of them would represent a saving of from three to five cents over what is now paid for one standard lettuce crate, with all of its drawbacks.

Furthermore, by eliminating crate ice and the bulge pack and by shipping in fan cars, it has been demonstrated that crate liners and pads are not necessary and that a greater payload can be put into a car. Roughly, the WGA staff figures that if it is possible to standardize on one or two crates of this type for highly fragile produce items, one car can be made to do the work of from

one and a quarter to two cars. Naturally, this means a big saving in freight costs, which can be passed on all along the line down to the consumer.

Table I shows the types of packaging and crating used on each of the produce items.

All the produce items were given a new type of sterilization treatment for bacteria and fungi control worked out by the Western Growers Experimental Institute technical staff. The Institute also devised machinery which would wash and pre-cool the products in connection with the germicide-fungicide treatment. All of the processing and packaging equipment—most of it designed and built in the Institute's laboratory—was moved by truck to the Molus Station shed for this experiment. It consisted of the combination hydro-cooler, washer and germicide-fungicide applicator; a centrifugal dryer, a wrapping machine (details of which are still secret) and conveyors. After centrifugal drying, the items were immediately packaged and/or crated.

Detailed data on unit-package constructions are given in Table II.

United States Department of Agriculture representatives supervised the pre-cooling of the produce and arranged to put Ryan recording thermometers, as well as resistance thermometers, in the cars in order to check the temperatures in all parts of the cars en route and at the destinations.

The cars were loaded by the Improved Carloading Co., using what is known as the "new type Hoak load." Crates were loaded crosswise on bottoms, spaced between rows by four-way Hoak open-air-type units and divided in the doorway by special separating braces. Eight-foot strips, two per row, were placed on the floor racks lengthwise of the car to hold crate cleats free of the floor racks.

Four of the cars carried 660 crates each, loaded six

† See "Produce Packaging," MODERN PACKAGING, Dec., 1947, p. 106.



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WOODEN JIG holds wrap-around crate open to receive two corrugated trays of packaged cauliflower. For WGA tests, shipment included pre-packed cauliflower heads as well as flowerettes.

high, while the Minneapolis car had 770, loaded seven high.

The Minneapolis car consumed six days in transit, Detroit eight, Cincinnati and Columbus each nine and Boston 11.

Temperatures in refrigerator cars throughout the trip maintained a remarkably close range between 35 and 40 deg. and on arrival the average temperatures taken from reading at 12 locations in each car were as follows: At Cincinnati, 36.8 deg.; at Columbus, 40.1 deg.; at Detroit, 35.7 deg.; at Boston, 36.6 deg.; at Minneapolis, 37.5 deg. The CO₂ content of the atmosphere in the Boston car when opened at the destination was 1.6%, while at Cincinnati samples in the bunkers

showed 1.6% and 1.0%. The Columbus car showed no CO₂ at all. No analyses were made at Detroit and Minneapolis.

Results of inspections

All cars arrived in generally excellent condition. In no case was a single crate found out of position or broken. All receivers were very much pleased with the method of shipping, which permitted rapid unloading with the minimum of labor. The smaller crates were more easily handled than those generally used for bulk produce.

The performance of the various items was summarized as follows:

Lettuce. Both packaged and bulk lettuce were in very good condition on receipt, with the packaged product showing slightly less wilt. The lettuce sold well, but probably would have sold better if the packages had been better, observers said. The 75 NF Pliofilm gave sufficient clarity and freedom from fogging to allow the buyer to see the head fully. However, the loose, pillow-like wrap allowed the leaves on the head to loosen. The poor seals were broken by handling in the retail store. The store managers indicated they would prefer the film to be wrapped tightly on the head.

The red butt of the lettuce heads received unfavorable comment by both store managers and customers in some areas. Generally speaking, the colored butt did not too seriously affect sales, but it would be desirable to eliminate if possible.

The 75 NF Pliofilm appeared to be sufficiently impermeable to moisture to keep the lettuce from wilting when exposed to store conditions with no refrigeration. In the tightly sealed packages, puffing appeared in some packages after exposure to room conditions for 18 hrs.

Celery. Packaged and bulk celery were in excellent condition on receipt, but the packaged product rated

TABLE I—TYPES OF PACKAGING AND CRATING

Item	Shipment	Package	Crating	Remarks
Lettuce	Bulk and packaged	Machine wrap 75 NF Pliofilm	2 layers. 24 heads. 4 doz. size. 30 heads. 5 doz. size. Weight 27 lbs.	Western Growers machine wrap about 15 per min.
Carrots	Packaged	1-lb. bags 450 MSAT-86 cellophane 120 NF Pliofilm	About 50 pkgs. per crate	Tops of carrots cut off flush
Celery	Bulk and packaged	Bags 450 MSAT-86 cellophane 120 NF Pliofilm	18 stalks 12-13 in.* 28 stalks 10-11 in. 32 stalks 8-9 in.	All stalks trimmed to 15 in. length
Brussels sprouts	Packaged	12-oz. bags 300 MSAT-86 cellophane 120 NF Pliofilm	About 36 pkgs. per tray crate
Broccoli	Bulk	24 heads to crate	Head about 1 lb., 2 oz., 6 in. long
Cauliflower heads	Mostly bulk; few crates packaged	Machine wrap 75 NF Pliofilm	Heads laid in tray crate	Leaves and jackets removed to leave only edible portion
Cauliflower flowerettes	Packaged	Bags 300 MSAT-86 cellophane 120 NF Pliofilm	Packages placed in tray crate	Heads broken up into flowerettes

* Circumference.

TABLE II—DETAILS OF PACKAGE CONSTRUCTION

Item	Film	Ventilation	Construction	Closures
Lettuce	75 NF Pliofilm (no cellophane wraps)	Part ventilated, part un-ventilated	2 sheets sealed on 4 sides. Size approx. 7 in. by 8 in.	Fin sealed 4 sides
Carrots	120 NF Pliofilm	Part ventilated, part un-ventilated	Flat bag folded bottom 6 in. by 12 in.	Top folded over, stapled saddle label
	450 MSAT-86 cellophane	None	Flat bag folded bottom 6 in. by 12 in.	Top folded over, stapled saddle label
Celery	120 NF Pliofilm	None	Pinch bottom gusset 4½ in. by 19½ in.	Top folded over, stapled saddle label
	450 MSAT-86 cellophane	Ventilated	Pinch bottom gusset 4½ in. by 19½ in.	Top folded over, stapled saddle label
Brussels sprouts	120 NF Pliofilm	Part ventilated, part un-ventilated	Flat bag folded bottom 6 in. by 12 in.	Top folded over, stapled saddle label
	300 MSAT-86 cellophane	Part ventilated, part un-ventilated	Flat bag folded bottom 6 in. by 12 in.	Top folded over, stapled saddle label
Broccoli	No wraps used
Cauliflower heads	Some wrapped in 75 NF Pliofilm—Boston and Minneapolis cars	None	2 sheets sealed on 4 sides	Fin sealed 4 sides
Cauliflower flowerettes	300 MSAT-86 cellophane	None	Pinch bottom 4 in. by 11 in.	Top folded over, stapled saddle label

slightly higher on most counts. This item appeared very good in both cellophane and Pliofilm and sales were good. The bag is apparently a very acceptable type of package for celery. The Pliofilm appeared hazier than the cellophane, but not enough so to affect the sales.

Carrots. No bulk carrots were shipped. The packaged carrots were in excellent condition on receipt. These were bagged with tops off in both cellophane and Pliofilm bags and there were some reactions to the lack of tops. In spite of this, the sales reaction was very good. The bags were too large, allowing the carrots to move around in the package. The appearance of the Pliofilm on the carrots was reported poor, due to haze. With further refinements in adapting the bag size and closing the bag to make the package less loose, pre-

packaging should be very acceptable for carrots, observers said.

Brussels sprouts. These were packaged in cellophane and Pliofilm bags; no bulk shipment was made. The Pliofilm appeared hazy, but not so much so as on the carrot packages of this material. The bagged Brussels sprouts sold very well. All store managers spoke very highly of the bag package in preference to the paper box in which Brussels sprouts have been sold generally. The buying public reacted in a like manner.

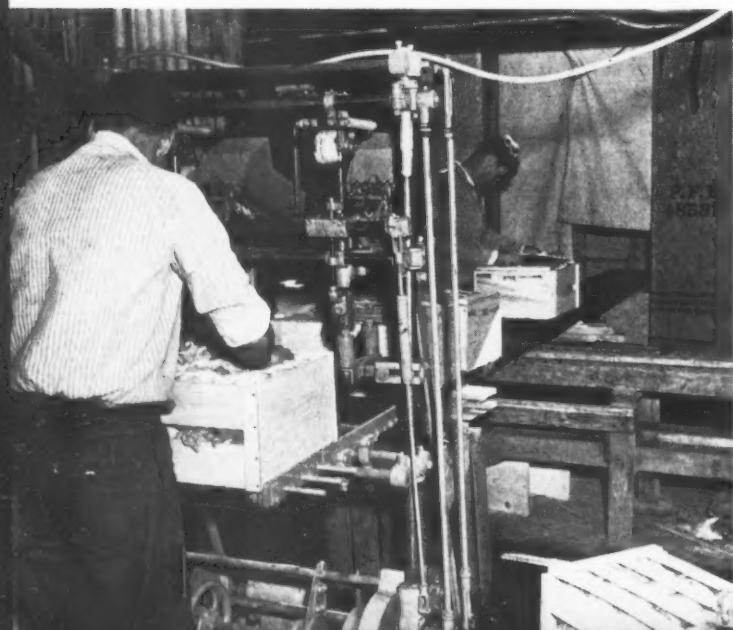
In these packages, proof was secured that Brussels sprouts need a ventilated package. In both the cellophane and Pliofilm packages which were ventilated, the sprouts had a good odor, but the odor in the unventilated bags was considered unsatisfactory. In fact, this odor was found in the bags when the cars were unloaded, having developed even with the packages under the good refrigeration of the cars.

Cauliflower heads. This item was not packaged except in a very small way for the Boston and Minneapolis cars. For these, the trimmed heads were wrapped in Pliofilm on the Western Growers' machine. The heads were small to start with and, when trimmed free of leaves, appeared extremely small and were difficult to sell either wrapped or unwrapped. However, in Minneapolis the wrapped heads sold better than the unwrapped.

"It appears that further work will have to be done to get an acceptable package for cauliflower," said the Du Pont report, "particularly to make it look the value and also to protect the head from bruising. The buying public apparently is not yet ready to accept fully trimmed cauliflower heads, either wrapped or unwrapped."

Cauliflower flowerettes. A very small number of these bagged flowerettes were placed in the Boston and Columbus cars. The bags were of cellophane and Pliofilm

LIDDER applies top to nailed crate of lettuce. With bulge eliminated, application of compressed air in this operation is not required.



and were not of good shape for filling. They should have been perforated to admit oxygen, since at both Columbus and Boston off-odors were noticed in the bags. At Columbus, A. & P. refused to put the Pliofilm bags on the market, due to odor; likewise, odor was noticed in the cellophane bags at Boston. The Columbus A. & P. cut the unwrapped cauliflower heads into flowerettes, placed them in trays and over-wrapped them. These sold satisfactorily. From the limited experience in this test, it appears that further work needs to be done to develop the proper package for flowerettes to be packaged on the West Coast.

Broccoli. Although no broccoli was packaged in any of the cars, it appears that this item is one where the wrap could possibly be of great value. In the shipments involved, there was considerable broccoli near maturity when the cars were received. The result was that, as soon as the broccoli was placed on sale in the warm stores, the buds started to open up into the small yellow flowers. This does not affect the eating qualities of the broccoli, but the buying public has come to regard broccoli that has flowered as undersirable.

Conclusions

1. The performance of the fan-equipped refrigerated cars was such that satisfactory temperatures were maintained without top or package icing. In these shipments, the produce was properly pre-cooled before loading.

2. Condition of crates in all cars was excellent. All receivers were enthusiastic about the method of loading and the freedom from top icing. All cars were unloaded in the minimum of time with the minimum of labor.

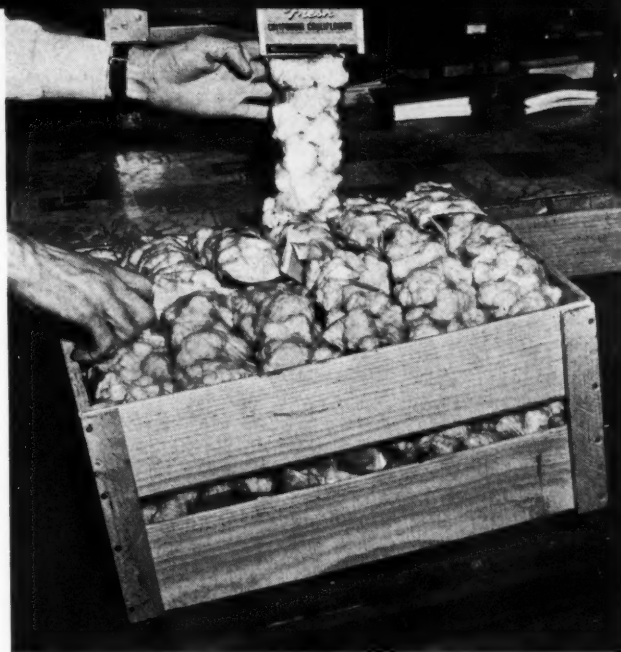
3. Chemical treatments given the produce by the Western Growers Experimental Institute were apparently effective, as in no case was any occurrence of bacterial spoilage found. However, no untreated produce was included in the shipments for comparison.

4. From the limited amount of packaged produce in these cars, it appears feasible to package lettuce, celery, carrots and Brussels sprouts at the point of origin and transport them to the Eastern markets. *There appeared to be no appreciable impairment of the appearance of the packages or the quality of the produce in comparison with produce packaged at the point of sale.*

5. The tests indicated that, when pre-packaged produce items such as were included in these tests are shipped from the West Coast in refrigerated cars, store warehouses can handle through retail stores and sell with no more than the usual precautions (selling within the first day or two and holding overnight under refrigeration when not held in a refrigerated display case). Further work would have to be done to determine if pre-packaged produce could be sold to the car-lot receiver and distributed through the usual channels to the retail stores.

6. Sales in the retail stores indicated the buyer preferred the packaged to the unpackaged produce.

7. Sales reactions on these test shipments were favorable enough to induce some of the receivers to



CAULIFLOWER HEADS either too large or too small for a standard pack were segmented and pre-packaged. These 12-oz. consumer packages of flowerettes, using Pliofilm or cellophane, sold rapidly at all the retail outlets.

order cars of pre-packaged lettuce, celery and carrots.

Acceptance by distributors, retailers and consumers is vital to the success of a shipper-pre-packaging program. The highest recommendations of the technical experts will mean little unless the trade accepts the practice and likes the packages. Accordingly, the following typical comments are significant:

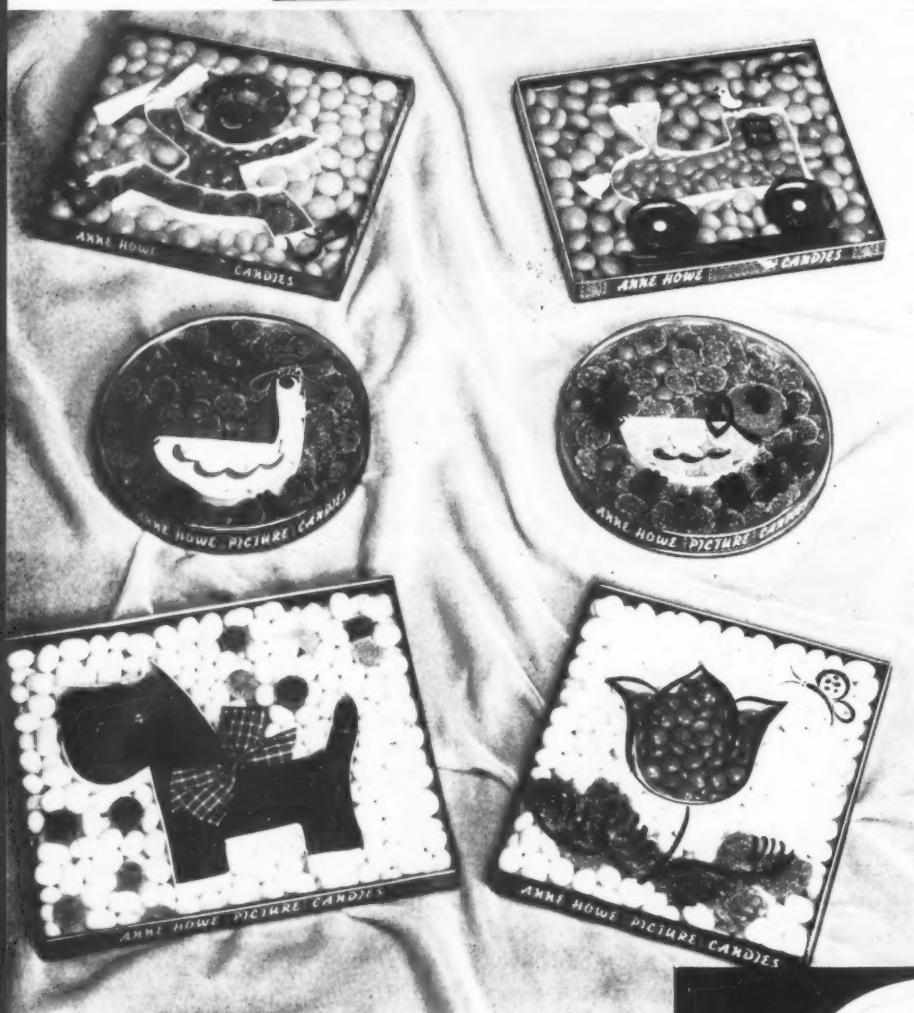
"I think the new lettuce crate should be used instead of the crate now in use. I have never seen a car of Western produce arrive in such fine condition. The load could not have been better had it been part of the car. When it came to unloading, it really was nice. This was the first car our boys have ever unloaded with a smile on their faces. There was no mass of ice and water to wade through, no straining of back and guts, not even a small hernia. In other words, the boys were able to pick up these crates and pile them like they contained perishables and not iron."—*Allan Commission Co., Columbus.*

"All of the commodities arrived in good condition except for a little discoloration on the cauliflower. The reaction of the trade here (both wholesalers and retailers) was mostly very favorable. They liked the package and everything about it. The tendency is to prefer packaged merchandise."—*Boston.*

"Each one of us here in the office took home a sample of the produce from the car which arrived on Sept. 16. In our own household, we finished the celery on Saturday, Oct. 4. We also used up the last of the carrots on the 4th—and they likewise were good condition. Some of the employees report that they still have celery and carrots in their homes and both these items appear to be fresh and edible."—*J. B. Petzhold, Cincinnati.*

"Today, which is the fifth (Continued on page 188)

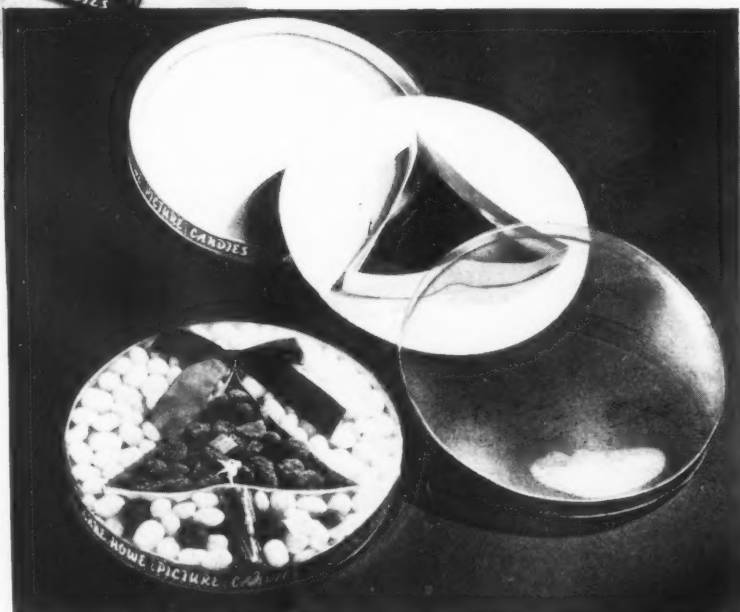
Picture pack



Product makes the design in these intriguing new candy packages using transparent acetate covers with special inside dividers which form candy into colorful designs

APPEAL is achieved by picture arrangement of candies showing through acetate box covers. Sometimes the entire idea may be conveyed by special separators in box, as illustrated by Scottie package. Other times outline of design in emphasized by printing on acetate, registered with separators.

PACKAGE ELEMENTS comprise paper-board base with printed acetate side, separator affixed to positioning disk which fits in box base, transparent acetate cover.



candies

Howe Products, Inc., Chicago, makes pictures out of candy. Its patented packs are among the many outstanding eye-appeal ideas that are possible only because of the transparent package.

Howe Products is Charles A. Howe and his brother John. These two were in the bulk-candy business. Competition was keen. They were making bread and butter, but no cake. Then suddenly one day Charles got the idea of arranging the bulk candies—green, yellow, red, black, white—in boxes so that through an acetate cover they would make pictures—pictures children would love and grown-ups would like as novelty gifts.

A specialist in designing for children was engaged and came up with many ideas for the candies. A trade name, Anne Howe's Picture Candies (for Mr. Howe's wife), was chosen.

This year, during the holiday season, these special

picture packs were fast sellers on department-store and confectionery counters all over the country. A Scottie dog has black licorice for his body, a sour ball for an eye, a plaid ribbon for a collar, white mints for a background. A chicken has a yellow gum-drop head, yellow mints for a body, licorice for feet. Sambo has a gum-drop head, red hots for a body, gum drops for legs. Other designs are a gay tulip, a train, a snow man, a rocking horse, a Christmas tree, a deer, a Santa Claus. For Easter there will be rabbits, more chicks and other seasonable ideas. All are revealed through transparent box covers.

The growth of this idea required the development of special packaging technique. Basic elements of the packages, either square or round, are paperboard or combination paperboard-and-acetate-tray bases with drawn or fabricated acetate lids made of 0.010-in. sheet. These acetate covers are printed with decorative high-lights to fit in and register with separators or dividers which confine the candy to the picture forms.

The overprinting on the acetate may be a complete outline of the subjects or it may be merely a few dashes of black or white to help create the over-all picture. On the "train" package, such elements as the bell on the front of the locomotive and the yellow bird perched on the top of the cab are printed on the acetate to give more character to the design. The Scottie, on the other

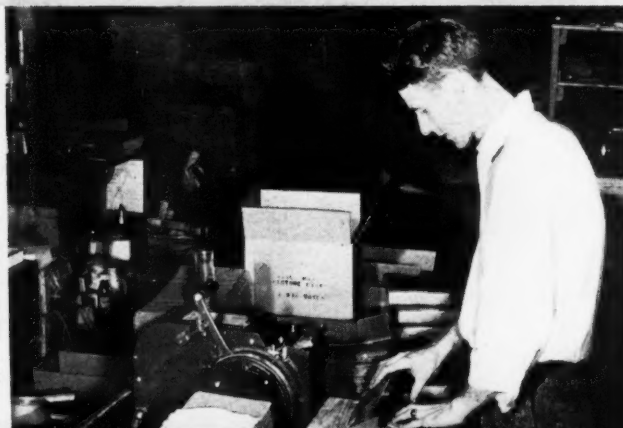
FIRST STEP is to fill in background candy and fill space within divider to form a tree.

SECOND STEP adds decorative touches—candy for tree trunk, ribbon bow. Operator covers box and check weighs it.



THIRD STEP is spot seal with acetone. On boxes with paperboard base, pressure-sensitive cellulose tape is applied.

FINALLY candy is covered with cellulose wadding, inserted in shipping carton, sealed with gummed tape.



hand, is arranged in a box with no printing on the acetate. The sharp silhouette of the black licorice against the white-mint background, with plaid bow and sour-ball eye, requires no further emphasis to be clearly recognizable. Overprinting is used only where necessary to complete the picture. In some designs, where production does not justify printing, silk-screen is used.

Most exacting part of the operation is the production of the specialized separators or dividers. These are prepared by assembling the separator strip with a die-cut paperboard piece which is made to the square or round shape of the box and is used for positioning the vertical part of the separator within the box. The vertical strip is cut and scored on a scoring press, then folded to shape and glued or stapled to the positioning cut-out. These separators are prefabricated and dropped into the box just prior to the time the candy is packed.

Girls are trained in preparing the separators and have little difficulty once the design has been worked out. Production of the separators is a costly item, since it is now all hand work and involves considerable labor, but the company is working on methods to perform this step of production semi-automatically, which will reduce costs considerably and permit faster packaging.

The package is assembled as follows:

1. The assembled separator is positioned in the box bottom and placed before the first operator.
2. Operator fills in background candy and positions one or possibly two individual pieces, such as the wheels

on the locomotive or the face on the Sambo figure.

3. The second packer fills in the center section of the separators and places possibly two individual pieces of candy to create the over-all pattern. She also applies the printed box lid and check weighs each package.

4. The acetate package is sealed by dipping a brush in acetone and running it along the edge of the lid. Paperboard bottoms are sealed with cellulose tape.

5. The package is then covered with a sheet of cellulose wadding to keep the candies in place and slipped into a paperboard sleeve.

6. Final operation is the insertion of the package into a wrap-around corrugated container, of the type used in mailing books, by means of a mandrel fixture. Containers are sealed with gummed kraft tape. The packages are placed in a corrugated shipping box.

Each different design demands a variation of the foregoing procedure and the line is usually set up for one type of box at a time.

The initial success of the Anne Howe candies indicates that a volume market can easily be reached for such specialties if retail prices can be reduced through greater economy in packaging costs. The company's study of semi-automatic methods for prefabricating the separators is being planned with that aim in mind.

CREDITS: Boxes, A. George Schults Co. and A. E. Robinson Co., Chicago. Acetate sheeting, Celanese Corp. of America, New York. Cellulose wadding, Kimpak, manufactured by Kimberly-Clark Corp., Neenah, Wis., supplied by Abana Products, Chicago.

TOY THEATRE WITH CUT-OUT ACTORS



An idea that will go over big with the kids is a two-piece folding box for candy that can be converted into a miniature stage with circus-character actors. The cover is die-cut to form the proscenium arch when positioned upright over the box base turned upside down to make a realistic stage.

Characters are perforated and may be punched out of an insert which is placed inside the die-cut window of the box lid.

The candies have just been introduced by Small Fry Candies, Inc., a new firm specializing only in candy packs for children. The packs contain lollipops, popcorn, molded chocolate animals, peanut candy.

A similar type of pack containing candy Easter eggs and chocolate bunny with box stage and cut-outs of Easter characters has been prepared for the Easter market.

CREDIT: Design, Jerome E. Waller, East Orange, N. J. Box tray, Essex Paper Box Mfg. Co., Inc., Newark, N. J. Insert, Lutz & Sheinkman, New York.

MULTIPLE HAND FILLER

**Pharmaceutical company devises a portable vacuum head
that can fill liquids in 10 bottles simultaneously**

Faced with a production schedule that calls for filling many different liquids in glass containers of varying sizes and in quantities ranging from several hundreds to many thousands, Strong Cobb & Co., Inc., Cleveland, have developed in their own plant an unusual and highly adaptable filling device.

Filling machines, of course, are available for standardized routine operations on a mass-production basis. Fully automatic equipment, however, is scarcely justified for operations like theirs—it would require many machines of different types and sizes, occupying a great deal of floor space. The overhead expense would mount sharply, due to idle machine time.

The device which their own engineers have evolved is basically a portable vacuum filling head, very similar to the conventional types except that of necessity it is somewhat more versatile. It can have as many as 10 filling spouts and thus fill 10 bottles at once. Several of the filling heads (Strong Cobb has about 20) may be attached to a central vacuum system and operated simultaneously to fill different liquids into containers from $\frac{1}{8}$ -oz. up to 1-gal. capacity. Speeds as high as 35 and 40 per min. have been attained, closely approximating the speeds possible with semi-automatic vacuum fillers.

The head is constructed of stainless steel or copper tubing, depending on the type of product to be filled, and the filling height is controlled by washers or gaskets.

It is a simple matter, in their experience, for an operator to connect the filling head to the vacuum system and also to a reservoir for the overflow of liquid.

Adaptation of the heads to versatile performance was the principal problem encountered. Another consideration was that of devising each unit to prevent undue fatigue on the part of the operators. The filling process, particularly for containers of larger size, requires constant lifting and handling of the filling units, but the structure is such that fatigue is reduced to a minimum.

Emphasizing the fact that they are in the private-formula pharmaceutical business only, Strong Cobb & Co. point out that they have no intention of manufacturing units of this character for sale. They are quite willing, however, to discuss the principles of the method with any other packager who may be interested in adopting it. In their opinion, while it would require a certain amount of technical skill to construct these filling heads, it would not be difficult for anyone familiar with the principles involved. Strong Cobb's own experience is freely available to others who may benefit.

SIMPLICITY AND SPEED characterize Strong Cobb's use of filler for a wide variety of liquid products in containers ranging from $\frac{1}{8}$ oz. to 1 gal. Here six spouts, with lines leading to product tank and to central vacuum system, are being used. Speed can reach 40 per minute.





Folding paperboard display cartons have been introduced by Freydborg Bros.-Strauss for their various types of decorative ribbons, recently incorporated as a family under the trade name "BeauTye." The display features a die-cut ribbon design. Foil wrap-around labels in blue and silver also carry the trade name. Relating all products for display in this manner aids in merchandising and provides product identity for the consumer.



This set-up box forms a sturdy display kit containing six full-sized bottles of Marcella hypo-allergenic nail lacquer, distributed to dealers as a counter-testing unit. Women allergic to most nail polishes may actually test the product and select the desired shade from this counter unit before making a purchase. Display, Williams Bros. Paper Box Co., St. Joseph, Mich.



Omega Watches of Canada offers jewelers this motion display showing a replica, in copper foil, of the actual movement of their self-winding watch. Two watches in their cases rest on wood base; another fits around the wrist of arm printed on paperboard backpiece, which is printed in four colors. Display, Gorrie Advertising Service, Ltd., Toronto.



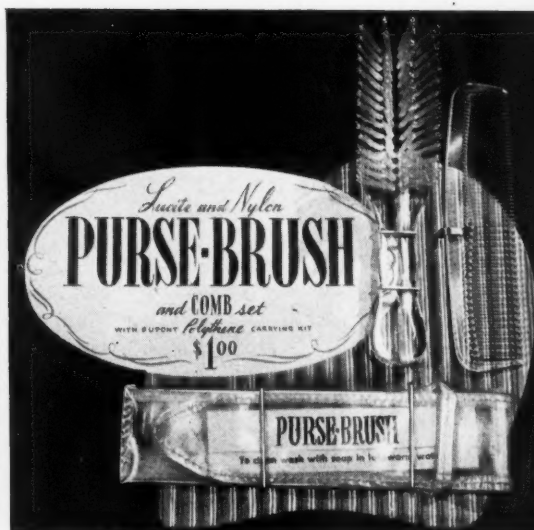
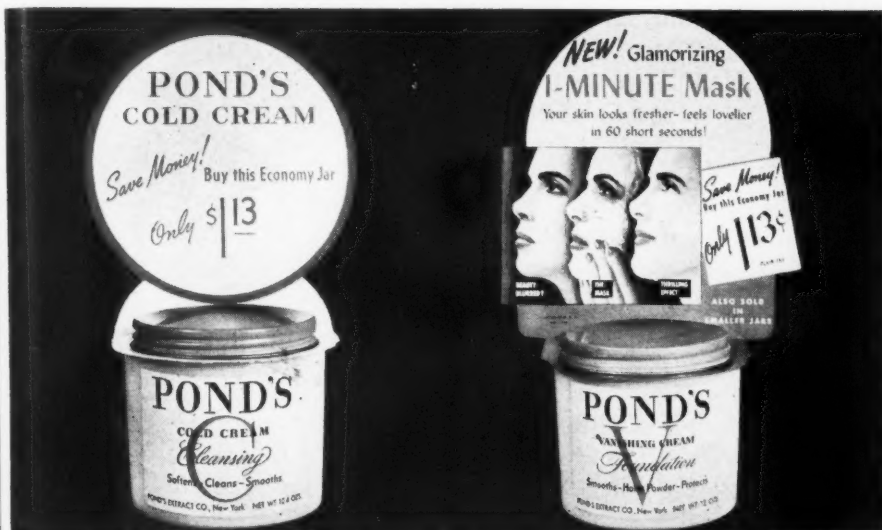
"Costs so little—tastes so good" is the theme of these two display pieces for packaged split peas marketed by Allen V. Smith, Inc., Marcellus Falls, N. Y., in its "economy" promotion program. The "Save Those Pennies" counter card, die cut and scored in the center, holds an actual package of peas; piggy banks surrounded by pennies are reproduced on either side. Both cards feature a white circle for retailer price marking. Displays, Hopp Press, Inc., New York.



Cellulose acetate display for B-D thermometers simulates a medicine chest to dramatize their logical storage place in the home. Case is white; shelves are transparent to give effect of glass. Headpiece is a lamination of paperboard and cellulose acetate. Display, Graham Products, Inc., Springfield, N. J. Case injection molded by Maurice A. Gagnon Co., Pawtucket, R. I. Headpiece, Hopp Press, Inc., New York. Cellulose acetate, Celanese Corp. of America, New York.



Display Gallery



An economy keynote is being applied in promoting Pond's cosmetics. Illustrated are two new collar displays for the economy jars of Pond's cold cream and vanishing cream, both featuring the theme "Save Money!" Price collar for cold cream is reversible, with price on one side and the exact retail saving of the economy size on the other. The one for vanishing cream is in full color, emphasizing the "1-minute mask" treatment.



Bennington Brush Co. uses an easel display with comb, brush and polyethylene kit attached for its "Purse-Brush" set. Copy calls attention to polyethylene material used for kit; insert tells consumer it is washable. Display, Star Sample Card Co., New York. Polyethylene, DuPont Polythene. Kit, Victoria Vogue, Inc., New York.



Three pieces comprise a unit display for Miraglo nail polish, recently introduced in redesigned containers. The one illustrated at the left holds 16 stock colors on a two-tiered platform. At the right, six new shades of polish are displayed on a single platform. Both prominently display the 10-cent price, with the legend, "Why pay more." The third piece is a color selector showing complete color line. Bottles and caps, Owens-Illinois Glass Co., Toledo, Ohio. Labels, Wheeler Van Label Co., Grand Rapids, Mich. Displays, Forbes Lithograph Mfg., Co., Cleveland,



Seagram's 7-Crown back-bar display, made of a pressed thermoplastic composition, is for tavern use. Four cards carrying price markings ranging from 30 to 65 cents—the price per drink—fit into a pocket in back of the display and are revealed through an opening in the crown design. Color is applied by stencil, spraying and rolling. Display, Lansky Die Cutting Co., New York. Design, David M. Bilsky, New York.

DOSE DISPENSER

Use of slip-off sleeve makes Harrower carton, dispensing tablets sealed in cellophane, instantly convertible from a trade to a prescription pack



WITH SLEEVE, which carries both trade and company names and dosage information, dispensing package is ready for over-the-counter sale.



Development of an unusual dose-dispenser package, designed to appeal to patient, physician and pharmacist alike, solved a problem encountered by Harrower Laboratory, Inc., Glendale, Calif., in preparing their new physiological peptic-ulcer treatment, Mucotin, for marketing.

Mucotin is a new antacid adsorbent in tablet form. Ulcer patients usually take two tablets between meals, so must carry tablets with them during the day. The usual daily dose is six to eight tablets.

Harrower wanted to package Mucotin to facilitate the withdrawal and sanitary carrying of the daily dosage and also to enable the pharmacist to dispense the product in its original package under his own label. Usual practice in prescription dispensing is for the pharmacist to scrape off a manufacturer's label—a time-consuming task—or to repackage the prescription in his own prescription box or bottle.

The Mucotin 50-tablet dose-dispenser package neatly fills Harrower's requirements. The tablets are sealed, two tablets to a pocket, in a continuous strip of cellophane tape of 25 pockets. The cellophane strip is rolled in a coil and placed in the carton. About $\frac{3}{4}$ in. of tape is drawn through a perforated slot in the side of the carton. The patient, by pulling the tape, causes the slot perforation to tear and the tape and tablets are easily withdrawn. The patient can then tear off as many tablets as he needs for his daily dosage. The cellophane keeps the tablets clean and fresh in the pocket or purse.

The product name, formula and dosage recommendations are printed only on a sleeve which slips over the carton. By removing the sleeve, the pharmacist may quickly convert the trade package to a prescription package. The front of the carton has a blank panel where the pharmacist can apply his prescription label. The package itself carries no identification, all labeling being printed on the removable sleeve. This prescription packaging saves the pharmacist many minutes of time.

A sample for physicians is an exact miniature of the trade package, except that space for the patient's name, prescribed dosage and the physician's signature is provided on the front panel. Sampling is an important technique in introducing ethical drug products and the unusual Mucotin sample has received ready acceptance from physicians.

CREDITS: Package development and cellophane strip sealing, William Steven Co., Los Angeles. Carton, Standard Paper Box Corp., Los Angeles.

WITHOUT SLEEVE, carton offers a blank space on which pharmacist can paste his own label for prescription sale. Each dose of two tablets is individually sealed in continuous cellophane tape. The same package in miniature size is offered to physicians for sampling purposes.

to sell more powder



To sell fine powder products effectively, merchandise them in exquisite containers topped, as these are, with beautiful closures of plastic and metal.

Your first step? . . . Ask us to submit designs of equivalent artistry for your product. The ingenuity of the world's largest manufacturer of set-up boxes will go into their creation.

F. N. Burt Company Inc.

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New York City • Philadelphia • Boston • St. Louis • Atlanta • Chicago
Cleveland • Cincinnati • Los Angeles • New Orleans • Memphis
Minneapolis • Kansas City • San Francisco, California • Newark, New Jersey

CANADIAN DIVISION:

Dominion Paper Box Company Ltd., 469-483 King St. W., Toronto 2, Canada

"It's a darn good machine"



We often hear this from users of "PACKAGE" machines. Sometimes it comes from the operator or plant superintendent. Often from the man at the top of the organization.

Like some people you know and admire, "PACKAGE" machines are "easy to get on with"—don't require pampering. That impresses a user right away . . . They're dependable—don't let you down when you need them most . . . Accommodating—easily adaptable to new wrapping requirements and different types of wrapping materials . . . Quickly adjustable—for many package sizes. And they have a reputation to *maintain*. For "PACKAGE" wrapping machines have served America's leading package goods manufacturers for over 30 years. Served so well that they are used exclusively in plant after plant. In fact, they wrap 80% of all the machine-wrapped products in the U. S. A.

It's good sense to judge a machine as you do a man—on performance and reputation.

Write for our folder "Packages that Sell"



Packages that SELL...wrapped on machines that SAVE

PACKAGE MACHINERY COMPANY

SPRINGFIELD 7, MASSACHUSETTS

NEW YORK	CHICAGO	CLEVELAND	ATLANTA
DENVER	LOS ANGELES	SAN FRANCISCO	
	SEATTLE	TORONTO	



TECHNICAL

ENGINEERING • METHODS • TESTING

Charles A. Southwick Jr. • Technical Editor

ALUMINUM FOIL

I—Its properties for packaging

Extraordinary progress has been made in recent years in applying the tools of science and the methods of research to the art of packaging. No longer need products be merely wrapped or placed in containers. The hazards of storage and shipment can be appraised reliably and the package designed and constructed to afford adequate protection. In the solution of the problems facing the packaging industry, aluminum foil has been extremely serviceable. Developments in this field continue under the impetus of laboratory and plant investigations. This article will present a summary of up-to-date information on the significant properties of aluminum foil in the various forms in which it is employed for packaging.

Mechanical properties

Aluminum foil is, in effect, aluminum sheet which is less than 0.006 in. in thickness. For packaging, the most commonly used gauges run from 0.0015 in. to

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This is the first of a series of three articles constituting a summation of years of research by one of the leading producers of aluminum foil. We predict that it will stand as the definitive reference on this subject for a long time to come. The first article presents data on mechanical properties, water-vapor transmission rates, reflectivity for light and radiant heat, hygienic characteristics, resistance to corrosion and other vital information.—ED.

By JUNIUS D. EDWARDS* and D. B. STROHM†

0.00035 in. One cubic inch of aluminum weighs about 0.0975 lb., so that one pound of aluminum foil of 0.0005 in. thickness has a covering area of 20,500 sq. in. Thinner gauges will, of course, have proportionately larger covering areas and thicker gauges smaller covering areas. Aluminum foil is rolled in widths up to about 36 in.

The reduction of sheet aluminum to foil gauges is accomplished by cold rolling and this cold working of the metal increases both strength and hardness. This, however, is accomplished with a loss of ductility and for most applications aluminum foil is annealed to put it in the soft condition. The tensile strength of annealed aluminum foil 0.001 in. thick is about 8.5 lbs. per inch of width. The annealed foil is dead-folding, which is an advantage in many packaging operations.

With constantly increasing interest in the storage of products at low temperatures, it is important to know that aluminum foil does not become brittle at low temperatures. In fact, recent measurements show that aluminum increases in strength and ductility as the temperature is lowered, even down to minus 320 deg. F.

The tearing strength of the thin gauges of aluminum foil is relatively low; however, by bonding aluminum foil to other materials, such as plastic films, paper and paperboard, a laminated product can be produced which has good strength and resistance to tear.

Water-vapor transmission of foil

An outstanding development of modern packaging practices is the control of the gas and moisture contained within a package. Usually this means control of the moisture content and the desired condition may vary over a wide range, depending on the material being packaged. In the case of tobacco and various food products, for example, the aim may be to maintain the moisture content within some preferred range. In the



FIRST PASS in a series of breakdowns in cold-rolling mills by means of which coiled aluminum sheet is converted into form of foil.

case of steel products, such as ball bearings, cutlery, etc., the aim may be to maintain an atmosphere of very low humidity to prevent rusting. This practice has gone beyond the control of moisture content and now includes packaging in controlled atmospheres containing carbon dioxide, nitrogen, etc.

The permeability of packaging materials to gases has, consequently, become an important consideration and standardized techniques for the measurement of gas permeability are available. Aluminum, the metal, is impervious to gases and this characteristic offers an important advantage to the package designer. It must be recognized, however, that not all gauges of aluminum foil have zero water-vapor transmission. In thicknesses below about 0.0015 in., foil will contain minute pinholes. In the very thin gauges of foil, such as 0.00035 in., these pinholes will be of sufficiently frequent occurrence to permit an appreciable rate of moisture

diffusion. However, as the foil thickness increases, the number of pinholes in any given area decreases and the size of pinhole also decreases. These pinholes seem to be an inevitable result of rolling metal to such a thin gauge; the best of rolling practices seem able only to control their size and number.

An idea of their effect upon water-vapor transmission is given by the data in Table I, which presents characteristic WVT values for foil of four different gauges. In making this test, 100 sheets (12 in. square) of each gauge of foil were taken and every tenth sheet tested for WVT. In the case, however, of the 1-mil foil, only eight of the 100 sheets showed pinholes in the test; in the case of 0.0007-in. foil, only 15 of the 100 sheets showed pinholes. In the two heavier gauges, only three pieces of the 0.001-in. foil and eight of the 0.0007-in. foil, respectively, had pinholes in the center area, where their effect on WVT could be measured. The data of Table I clearly illustrate the fact that there is considerable variation in the WVT of different test pieces of the same gauge aluminum foil. This is to be expected, of course, since any pinholes present are uniform neither in size nor in distribution. The averages, however, clearly indicate the trend toward lower per-

TABLE I—WATER-VAPOR TRANSMISSION OF ALUMINUM FOIL

Thickness of foil (in.)	WVT (gm. H ₂ O per 100 sq. in. per 24 hrs. with air at 100°F. and 100% R. H.)	Thickness of foil (in.)	WVT (gm. H ₂ O per 100 sq. in. per 24 hrs. with air at 100°F. and 100% R. H.)
0.00035	0.62	0.0007	0.07*
	0.11		0.08
	0.20		0.06
	0.23		0.05
	0.15		0.04
	0.69		0.08
	0.29		0.01
	0.34		0.04
	0.18		
	0.07		
	Average 0.29		
0.0005	0.08	0.001	0.02*
	0.05		0.03
	0.06		0.02
	0.12		
	0.15		
	0.09		
	0.13		
	0.31		
	0.17		
	0.04		
	Average 0.12		
Gauge of foil (in.)	Number of 12 in. square sheets with pinholes	Number of sheets with no pinholes	
0.00035	100	None	
0.0005	100	None	
0.0007	15	85	
0.001	8	92	

* WVT values not averaged because majority of the 100 sheets examined had zero permeability.

meability as the thickness of the foil is increased. The sample test area for the permeability measurements shown in Table I and elsewhere in this paper was approximately 10 sq. in.

The method employed in measuring the permeability of these materials to water vapor is essentially that described previously in this journal (1)¹. A glass test dish, filled with calcium chloride desiccant, is closed by the test membrane which is wax-sealed at the edges. The test dish, after weighing, is supported in a chamber filled with air of the required temperature and humidity; the air is maintained in positive circulation with a fan. After a measured period, the water-vapor transmission is determined by weighing.

Aluminum foil laminates

Mention has been made of the practice of bonding aluminum foil to other materials to produce laminates having a desired combination of characteristics for containers and wraps. These materials are usually paper and paperboard of wide variety and plastic films of numerous kinds. In producing laminates with very low permeability, it is important that good adhesion be secured to the foil. For this reason, the adhesive selected should be adapted to the materials to be laminated.

When the laminate is made with paper or paperboard, a water-dispersed adhesive such as sodium silicate, casein, casein latex or an emulsified resin composition may be employed. Adhesives of the hot-melt type have also been found particularly useful for this application; typical adhesives comprise amorphous waxes, used alone or modified with resins. Asphaltic adhesives are also useful for some laminates.

In laminating plastic films with aluminum foil, it is particularly important that the adhesive adequately wet both foil and plastic. Consideration must also be given to the fact that the foil is nonadsorptive and impermeable to solvent. This means that the adhesive should be selected for the specific plastic-foil combination to be laminated. For example, nitrocellulose-type adhesives find particular application in laminating cellophane and other cellulosic films, whereas vinyl-resin adhesives have been found quite satisfactory for acetate and certain other types of plastic films. Adhesives employed with plastic films are generally of the thermoplastic type, applied from solution or dispersion.

WVT of foil laminates

The mechanisms by which water vapor penetrates foil and plastic films are quite different. In the case of aluminum foil, water vapor penetrates by diffusion, but only through openings such as pinholes. In the case of plastic films, water vapor penetrates through the whole area of the film by solution in the plastic and diffusion from one side to the other. The WVT rate is determined by the composition of the film and its thickness. Because of the difference in the method of penetration, combinations of aluminum foil and plastic sheet-

ing offer very effective barriers to water-vapor and gas transfer.

If the foil is on the side of high humidity, water-vapor penetration is limited to the area of the pinholes. If the other side of the foil is covered with plastic sheeting and the adhesion between foil and plastic is complete, then the only areas of the plastic exposed to gas transfer are those areas outlined by the pinholes. For example, the measurements referred to on 0.00035-in. foil showed a total pinhole area of approximately 0.00004 sq. in. in 100 sq. in. of foil. Thus an extremely small area of plastic is exposed to water vapor and the moisture-excluding efficiency of the laminate is very high.

There are several problems involved in securing complete lamination of foil to plastic, but even though the plastic does not adhere to the foil at every point, a very effective combination can be secured. In Table II are given data showing the water-vapor transfer of foil laminated with two different types of plastic. These are commercial materials and examination showed that adhesion was generally good, though not complete. For comparison with these values another series of tests was run showing the permeability of the same foil and plastic simply laid one over the other without a laminating adhesive between. In this latter series of tests, any water vapor penetrating the foil could diffuse between foil and plastic and have the whole test area of the plastic available for water-vapor diffusion. Ten test pieces were run in each series to show the agreement between replicate samples. These data show that while good adhesion between foil and plastic is necessary for the most efficient barrier, water-vapor transfer is quite limited even when the foil and plastic are not laminated but form two barriers "in series," so to speak. As would be expected, these tests show that the

SKILLED OPERATORS and precision equipment are required to maintain uniform foil thicknesses. Here a strip of heavier-gauge aluminum foil is undergoing another breakdown pass.



¹ Figures in parentheses refer to "References" appended.

more complete the degree of adhesion between the foil and plastic, the less important is the permeability of the plastic film.

Untreated papers, as a rule, offer very little resistance to water-vapor passage. As a result, combining paper with aluminum foil, particularly when it is attached by glue lines and not an over-all adhesive, results in very

TABLE II—EFFECT OF ADHESION BETWEEN FOIL AND SHEETING ON PERMEABILITY OF LAMINATES

Description of material	Permeability (gm. H ₂ O per 100 sq. in. per 24 hrs. at 100°F. and 100% R. H.)	
	Laminated with all-over adhesive	Foil laid on plastic film—no adhesive
Aluminum foil (0.00035 in.) in combination with moisture-proof cellophane sheeting	0.019	0.136
	0.019	0.117
	0.011	0.058
	0.012	0.083
	0.013	0.107
	0.019	0.110
	0.020	0.100
	0.021	0.041
	0.014	0.040
	0.021	0.043
Average	0.017	0.084
Aluminum foil (0.00035 in.) in combination with acetate sheeting	0.004	0.254
	0.012	0.019
	0.024	0.015
	0.027	0.153
	0.018	0.050
	0.005	0.005
	0.015	0.200
	0.029	0.203
	0.029	0.413
	0.012	0.183
Average	0.018	0.150

NOTE: Permeability—foil, 0.3; cellophane, 0.45; acetate, 48.0.

PACK ROLLING can be used with foil in its thinner gauges. Two layers of aluminum foil are passed simultaneously through the rollers.



little change in the permeability of the foil. In the case of one particular lot of 0.00045-in. foil which was laminated to 35-lb. bond paper by widely spaced glue lines, the permeability of the composite product was only 15% less than that of the foil alone. That the reduction in permeability was not greater is not surprising since the paper alone, under standard tests, had a WVT of 325 gm. per 100 sq. in. per 24 hrs.

The data of Table III show that with proper laminating techniques and proper selection of materials, foil-plastic laminates having WVT values as low as 0.00 can be secured. To secure a laminate of uniformly low permeability, it is desirable to use one of the heavier gauges of foil, such as foil 0.001 in. in thickness.

TABLE III—WATER-VAPOR TRANSMISSION OF ALUMINUM-FOIL LAMINATES

Material	Thickness (in.)	Permeability (gm. H ₂ O per 100 sq. in. per 24 hrs. at 100°F. and 100% R. H.)	
		Flat	Creased*
Aluminum foil laminated	0.00035	0.00	...
with moistureproof cellophane	0.0009	0.01	0.03
Aluminum foil laminated	0.00035	0.01	...
with cellulose acetate	0.0012	0.02	0.07
Aluminum foil laminated	0.00035	0.01	0.01
with rubber hydrochloride	0.0008	0.01	...
Aluminum foil laminated	0.00035	0.01	0.02
with vinyl polymer	0.0012	0.02	0.01
Aluminum foil laminated	0.00035	0.00	0.04
with wax to 30# glassine			
Aluminum foil 2S-O	0.00035	0.07	0.42
Aluminum foil laminated	0.001	0.00	0.00
with moistureproof cellophane	0.0009		
Aluminum foil laminated	0.001	0.00	0.00
with vinyl polymer	0.0012		
Aluminum foil laminated	0.001	0.00	0.02
with wax to 25# glassine			
Aluminum foil 2S-O	0.001	0.00	0.40

NOTE: Each value in this table is the average of measurements on two or three test pieces. In some cases, two or more lots of laminates were tested.

* These test pieces were creased with four equidistant parallel folds and then with four more folds at right angles to the first; there were thus 16 crease intersections on the face of the test pieces.

Permeability of foil laminates to CO₂

Because of the interest in the use of carbon dioxide as an inert atmosphere in packaging, a series of measurements has been made on the permeability of two aluminum-foil laminates to this gas; these data are presented in Table IV. For comparison with the data on the laminates, permeability figures are presented for the plastic films alone. The evidence is quite convincing that although the plastic films alone show an appreciable permeability, the foil laminate is quite impervious to penetration by either carbon dioxide or water vapor. These data supplement the information presented in Table III.

Reflectivity of aluminum foil

A clean aluminum surface of high purity will exhibit a reflectivity for white light of approximately 90%. Commercial aluminum foil (Table V) may develop a

reflectivity as high as 88%. There is a tendency for the thinner, more highly burnished foils to exhibit the higher reflectivities. In the case of embossed foils, the reflectivity generally runs about 80 to 86%, depending on the particular foil and pattern employed. These measurements show the consistently high reflectivity of commercial aluminum foil.

TABLE IV—PERMEABILITY TO CARBON DIOXIDE AND WATER VAPOR OF ALUMINUM FOIL LAMINATED TO FILMS AND OF FILMS ALONE

Material	Permeability (gm. per 100 sq. in. per 24 hrs. *)		
	CO ₂ †	CO ₂ + H ₂ O	H ₂ O
Aluminum foil (0.00035 in.) laminated to moisture-proof cellophane	0.001	0.004	0.000
Aluminum foil (0.00035 in.) laminated to vinyl polymer	0.001	0.005	0.001
Cellophane alone	0.030	0.193	0.197
Vinyl polymer alone	1.78	4.18	2.72

* Recorded values are the average of concordant measurements on four different test pieces at a temperature of 77 to 81 deg. F.

† Permeability to carbon dioxide measured at 760 mm. pressure difference; carbon dioxide in next column was saturated with water vapor.

Aluminum foil in the thinner gauges may be produced by pack-rolling, that is, two sheets may be passed through the rolls together. The surfaces in contact with the rolls will be burnished, but the two faces of the foil which are in contact with each other have a somewhat duller surface and one which is more diffusing in character. While embossing may not seriously reduce the total reflectivity, it does reduce the specular reflection from the surface and correspondingly increases the diffuse reflection. For many applications, this increase in diffuse reflectivity is a desirable one from the standpoint of appearance.

TABLE V—REFLECTIVITY OF ALUMINUM FOIL FOR LIGHT
(Light from tungsten-filament lamp)

Description of foil	Total reflectivity (per cent)
Plain aluminum foil—0.0005 in.	87
Plain aluminum foil—0.001 in.	88
Plain aluminum foil—0.002 in.	82.5
Plain aluminum foil—0.005 in.	82
Embossed foil—0.00045 in.—bright	86.5
Embossed foil—0.00045 in.—medium	84
Embossed foil—0.00045 in.—dull	80.5

The high reflectivity of aluminum foil may be commercially important because of the bright metallic appearance which it contributes. The high reflectivity may also be of advantage under some circumstances in minimizing the temperature rise in a package when exposed to the heating effects of sunlight or other radiant energy.

The reflectivity will be reduced by coating with synthetic resin or laminating with plastic films. The amount of the reduction will vary, depending on the specific characteristics of the material employed. Certain plastics, such as the methacrylate resins and cellu-



PRINTING on foil can be done by any of the commercial processes. Here operator feeds embossed, paper-backed foil to flat-bed press.

lose acetobutyrate, are quite transparent to light and effect a minimum reduction in reflectivity.

Aluminum foil, of course, is opaque to light.

For reflecting thermal radiation such as from a hot stove or radiator, aluminum foils have even greater efficiency. For long wave length (infra-red radiation) of this type, the reflectivity of aluminum foil may be as high as 97%. Correspondingly, its emissivity or radiating power for radiation of this same wave length will be 3%. For thermal radiation of this type, the reflectivity (and emissivity) is substantially changed by any nonmetallic coating such as resin or plastic film of appreciable thickness.

Hygienic aspects of aluminum in packaging

The fact that aluminum does not produce any toxic effects makes it an entirely safe packaging medium. This fact has been established not only by scientifically controlled experimental investigations, but also by long experience, particularly with aluminum cooking utensils. Carefully controlled tests have proved that contact with aluminum, in contrast to a number of other metals, does not accelerate the loss of vitamins in cooking. The loss of vitamin C during pasteurization of milk in an aluminum container was no greater than when pasteurized in contact with glass. The loss due to heating under these conditions was about 30%, while pasteurization of milk in copper completely destroyed vitamin C (2). This is only one reason why aluminum foil caps have proved so satisfactory in the bottling of milk.

Another advantage of aluminum foil is the sterile character of the surface which results from annealing at a temperature of about (Continued on page 192)

TESTING COLLAPSIBLE TUBES

Methods of rating performance of coatings, inks and enamels under simulated conditions of consumer use.

By MILTON SCHOR*

One of the major problems encountered by the users of collapsible tubes during the war was that of securing a base coat, or enamel, that would adhere tenaciously to the metal of the tube during use and which, together with surface lacquers and inks, would not be unduly affected by contact with soap, soapy water or other products.

For a time the quality of the enamels on most tubes was very poor. In fact, shortly after the enamel was applied it would flake or peel off so badly that the base metal became exposed and very little enamel and decoration was left. This flaking or peeling took place in the plant at the filling or crimping machines, thus slowing up production, or—worse—in the hands of the consumers, causing complaints and loss of sales.

In an effort to set up criteria by which supplies of tubes could be rated on these qualities and unacceptable tubes excluded, test routines were worked out by Colgate-Palmolive-Peet Co. They proved successful and were adopted by research laboratories and by the collapsible-tube industry generally. Although the quality of tubes and their coatings has now greatly improved, the test methods should be of interest to any packager who regularly conducts quality-control tests.

Adhesion of enamels

The enamels, inks and coatings used on collapsible tubes are of many types; however, most of the formulas include some oxidizing oils and resins and require the addition of "driers" to harden. These "driers" are usually compounds of cobalt or lead. The problem of obtaining the proper hardness is more critical on a lead tube than with other metals because the presence of the metallic lead tends to continue the drying action and so

produce brittleness in the coating. However, improper formulation and processing of the coating will also produce brittleness and lack of adhesion on tubes of tin, aluminum or any alloy.

The solution of this problem was not easy. In the first place, most of the wartime tubes were of the lead-alloy type. Secondly, because of the wartime shortage of certain raw materials, the enamels themselves were often of a poor quality. With most of these enamels, exposure to air caused a continuing drying action. Over a period of time, this tendency toward over-drying caused the enamel to become brittle and hard.

Some enamels dried out much faster than others; this was due, in addition to exposure to air, to the surface upon which it was applied, plus the amount and kind of driers added to the enamel. Too much drier hastened the drying time of the enamel and also increased its brittleness, so that it cracked or flaked off; too little drier slowed up the drying so as to interfere seriously with the production rate.

Successful enamels were those having an oil base which maintained a thin film of oil between the lead and the enamel, thus reducing the drying effect of the lead tube. These enamels were, of course, much softer than the regular acceptable base coats, but had much better flexibility and adhesion. Another type of enamel used successfully was the non-oxidizing or plastic type that cured only under high baking conditions. This enamel was hard and had excellent alkali resistance.

The fact that an enamel was acceptable from one supplier did not necessarily mean that it was acceptable from another. The reason for this was that most tube manufacturers had different drying techniques. Some had a hot room where the enameled tubes were stored and dried at temperatures ranging from 140 to 200 deg. F. for 30 min. to 8 hrs., depending upon the production

Reference pictures for rating adhesion and



rate. Some of these hot rooms had fans to circulate the air, while others had no air circulation at all. Some had means for solvent removal, while others had no such provision. Thus, it was quite difficult to formulate a particular base coat that would be suitable for all plants and a different formulation had to be worked out for each tube manufacturer.

With the use of more strict drying controls—that is, the “conveyor type” drying, either low-bake (180 deg. F. for 20 min.) or “high-bake” (300 deg. F. for approximately 3 min.)—it is possible to have a more uniform and higher quality enamel on collapsible tubes.

Test for adhesion and flexibility

To determine the relative adhesion and flexibility of an enamel on a collapsible tube, the following accelerated crush test was devised.

The test involves the crushing of the enameled tube, thereby stressing the enamel, and then inserting the crushed tube into an oven held at 140 deg. F. and designed for free air circulation. The crushed tubes are rated before insertion into the oven and every 10 days afterward for a period of 30 days.

Apparatus required: In order to perform the accelerated test, a crushing apparatus is constructed similar to Fig. 1. This includes a stand on which to rest the tube, a mandrel with proper clearances which is inserted into the tube, and a crushing handle.

Procedure for this accelerated test is as follows:

1. Record the following data: trade designation and type of lacquer, ink and enamel; date of enameling, printing and lacquering; date of crushing.
2. Insert proper sized mandrel into open end of tube and crush, using handle as in Fig. 1.
3. Rate the enamel on the crushed tube according to Rating Chart A and in comparison with crush-test rating pictures shown below.
4. Place the crushed tube, if rated acceptable, in an oven held at 140 deg. F. and after a period of 10 days' exposure again record its rating (Rating Chart A and photos this page). If it is still acceptable, continue test for 30 days. After this time, pull open the crushed tube and rate according to Rating Chart A and the pictures shown on the next page.

The final decision on the rating of the tube is based

upon the last examination after storage at 140 deg. F. for 30 days. The initial examination can be used as a means of rejection (in case of a poor rating) or for quick evaluation by a trained technician.

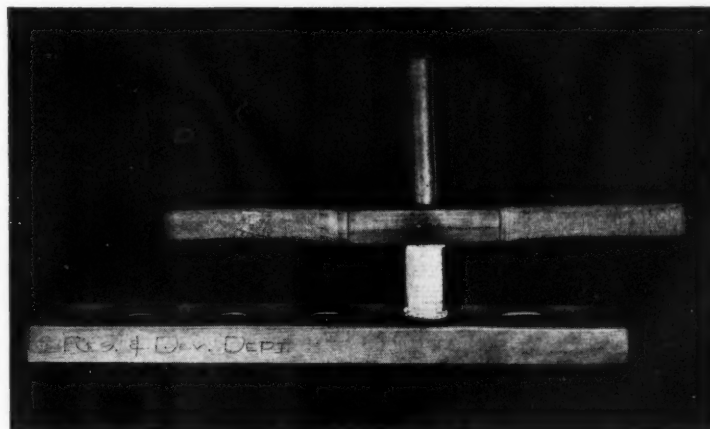
During the war, Rating 5 was the poorest acceptable rating used by this company. However, with the present availability of better raw materials and more efficient drying equipment, the tendency is toward a better rating, with Rating 1 as the ultimate requirement.

Comment: While this is an accelerated laboratory test, experience has shown that there is a reasonable correlation of the results (ratings) with storage and use during merchandising and customer conditions. A tube having a final rating of five can normally be expected to have a shelf life of about two years without serious cracking or peeling of the coating. It is obvious that tubes rating better than five will give better performance during the two-year shelf life and can sustain more severe conditions, such as might be encountered in export shipment, without serious deterioration.

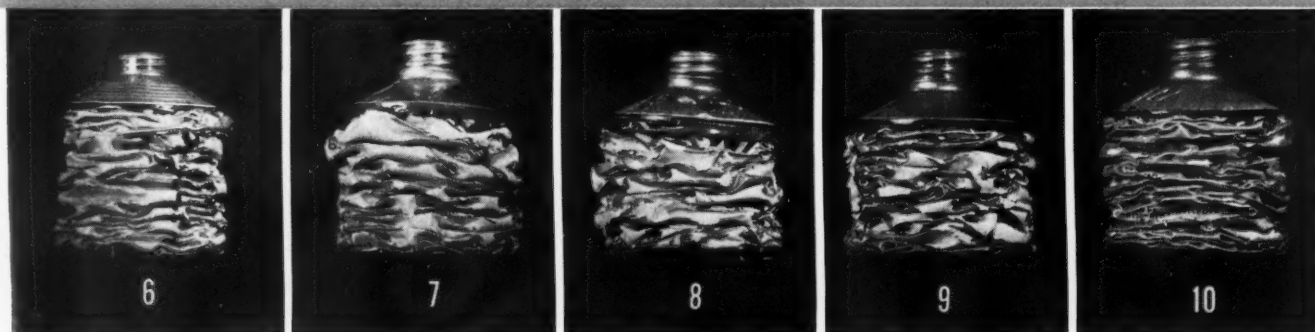
Tests for effects of soap

Because collapsible tubes usually come in contact with soapy water during use in the home bathroom, the ability of the lacquer, ink and/or enamel to resist the effects of soap is important to customer satisfaction. Accordingly, a test designated the “1% Soap Immersion

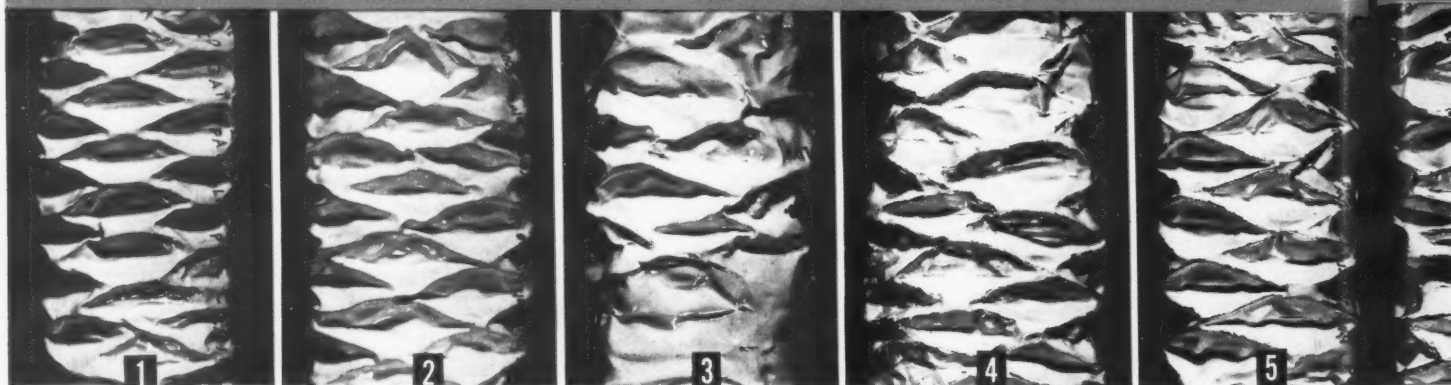
I. CRUSHING APPARATUS includes stand for tube, mandrel to insert in tube, crushing handle.



flexibility of enamels immediately after crushing



Reference pictures for rating adhesion and flexibility



RATING CHART A

CRUSH TEST RATING CHART FOR COATINGS ON COLLAPSIBLE METAL TUBES

(Accelerated aging test involves exposure of crushed tube to 140°F. for a period of 30 days.)

RATING	PERFORMANCE
1	Perfect performance; no sign of cracks or peeling. Coating hard, tough and elastic and shows good adhesion to the metal.
2	Excellent performance; no sign of cracks or peeling, but somewhat affected by abrasion.
3	Good performance; very fine hair-line cracks; no sign of peeling.
4	Fairly good performance; small, but distinct cracks, but no peeling.
5	Fair performance; cracks noticeable, but maintains good adhesion.
6	Fair performance; cracks considerably and separates from metal at some points of cracking.
7	Poor performance; cracks considerably and peels consistently at point of cracking.
8	Poor performance; cracks, peels and flakes.
9	Poor performance; cracks, peels and flakes extensively.
10	Very poor performance; coating flakes off without crushing or bending.

Test" is given. The dilute soap solution is mildly alkaline and can cause bleeding of color, as well as softening of the tube coating.

Materials required to test the effects of soap are:

1. A 1% solution of white chip soap is prepared by dissolving the required amount of soap chips in a small amount of hot distilled water and then diluting to the proper volume. The solution is then cooled to room temperature.

2. Collapsible metal tubes, enameled, printed and lacquered, not more than one month or less than seven days old at time of test.

Procedure for testing the effects of soap involves:

1. Remove the caps from two of the tubes supplied for the test. Immerse one tube cap end down and the other tube open crimp-end down in beakers containing the soap solution. If the tube tends to float, a laboratory clamp attached to a stand outside the beaker should be used to hold the tube under the soap solution, care being taken not to crush the submerged end of the tube against the beaker. A separate beaker must be used for each tube.

2. Note any immediate changes.

3. Observe again after 24 hrs.' immersion. Note any tendency of color to bleed from the tube into the soap solution.

4. After immersion for the required number of hours as set up in quality specifications, remove the tube from the soap solution. The tube then should be rinsed in gently flowing tap water at or below room temperature, laid out on a towel and examined immediately without further drying.

5. Grade the tube according to Rating Chart B.

Combined ratings

In rating the base coats and inks on the combined tests, procedure is as follows:

1. Number designates crush-test rating according to Rating Chart A.

2. The first eight letters of the alphabet designate the performance of the base coat on soap immersion, according to Rating Chart B.

of enamels (tubes opened) after 30 days at 140 deg. f.



3. Six of the last letters of the alphabet (S through X) designate the performance of the ink on soap immersion, according to Rating Chart B.

Examples: The designation "3BS" would indicate a base coating having a crush-test rating of three (i.e., "good performance; very fine hair-line cracks; no sign of peeling"). The letter B would indicate that the coating on soap immersion showed loss of gloss, but no softening, blistering or pulling away from the metal. The letter S would indicate that the ink showed no sign of bleeding, could not be rubbed off with ball or thumb and had no effect on the base coating.

If not all the performance tests are given, various elements of the designation can stand alone. Using the same example, the designation "3S" would refer to

crush-test rating and ink performance; "BS" would indicate base-coat and ink performance on soap immersion test only and "3B" would show crush-test and base-coat performance.

The combined rating based upon the two test procedures gives the user of collapsible tubes an index of performance of the tubes and also a reproducible basis of rejection or acceptance. For the tube maker, the combined rating will tell how his tubes and coatings compare with those of other manufacturers and also will show exactly how failure occurred in case of a rejection by his customer. However, the most important fact is that these laboratory procedures make it possible to guarantee that a product will be delivered to the consumer in an attractive and usable package.

RATING CHART B			
SOAP IMMERSION TEST FOR COATINGS ON COLLAPSIBLE METAL TUBES			
BASE COAT RATING	BASE COAT	INK RATING	INK
A	Shows no effect of immersion. No sign of softening, blistering, or pulling away from metal.	S	No sign of bleeding. Cannot be rubbed off with ball of thumb or towel. Also, has no detrimental effect on the base coat.
B	Shows loss of gloss only. No softening, blistering, or pulling away from metal.	T	No sign of bleeding. Can be rubbed off with ball of thumb or towel only under much pressure.
C	Shows loss of gloss. Signs of softening are noticed. There is no blistering or pulling away from metal.	U	Very slight bleeding after which ink sets and cannot be rubbed off.
D	There is loss of gloss. Few blisters are noticed. There is very slight softening, but no pulling away from metal.	V	No sign of bleeding. Ink rubs off when a little pressure is applied with thumb or towel.
E	There is loss of gloss, softening, and blistering, but no great pulling away from metal.	W	Very slight bleeding, but ink can easily be rubbed off.
F	Pulls away from metal. No softening, or blistering.	X	Ink bleeds markedly.
G	Softening, blistering, and pulling away from metal.		
H	Coating softens and dissolves in solution.		

Questions and Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.

Equipping machine for tear-tape wrap

QUESTION: *We are makers of a line of baked goods including various kinds of bread. We are interested in using a tear strip to facilitate the opening of our cellophane-wrapped baked goods. Can you tell us who makes machinery for applying such tear strips or how we can put the strip on in our own automatic wrapping equipment?*

ANSWER: Tear strips have had wide acceptance for many products wrapped in plastic and transparent films and there is no reason why such an opening means would not be satisfactory for your line of products. However, the insertion of a tear strip, opening string or similar device must be integrated with certain operations in your automatic packaging machinery.

It is suggested that you write to the manufacturers of your wrapping machines for their help and advice on how such opening means can be applied to the machines. In this way you will obtain the most efficient and quickest answer to this problem, since there is no way in which the application of tear strips can be performed as a separate operation.

Oil seepage in polystyrene slip-top box

QUESTION: *We are considering a molded polystyrene box with a slip-on cover for one of our new products. The product is a nut butter which, after packing, has a coating of oil on its top surface. This oil has a tendency to creep through the closure and we are interested in preventing this occurrence, as well as in preventing the oil from leaking out after the package has been opened.*

ANSWER: The problem of holding the oil in the polystyrene slip-top box is very difficult because of the tendency of the oil to penetrate and seep through all but the best seals. Furthermore, you have no means for developing sufficient and uniform pressure to be able to use a liner on the cover of this box.

It is suggested that you try heat sealing to the top edge of the box a membrane which is in itself resistant to the oil and which carries a coating that is not softened by the oil and that also adheres strongly to the polystyrene. For this purpose, you should try cellophane, glassine or parchment paper which have been given additional coatings of materials so formulated as to make them heat sealing.

Great care will have to be taken to make sure that

the polystyrene finish is free of mold marks or other surface irregularities and has the proper area and shape for supporting this membrane.

It is impossible to specify the kinds of coatings which would solve this problem, but you can very quickly find suitable combinations of membrane material and coatings after a limited number of experiments in your laboratory.

Such a membrane, however, will not be satisfactory in preventing oil seepage after the package has once been opened. The only answer to this phase of the problem would be to have a threaded or positively seated cover of some type which carries a greaseproof and oilproof liner.

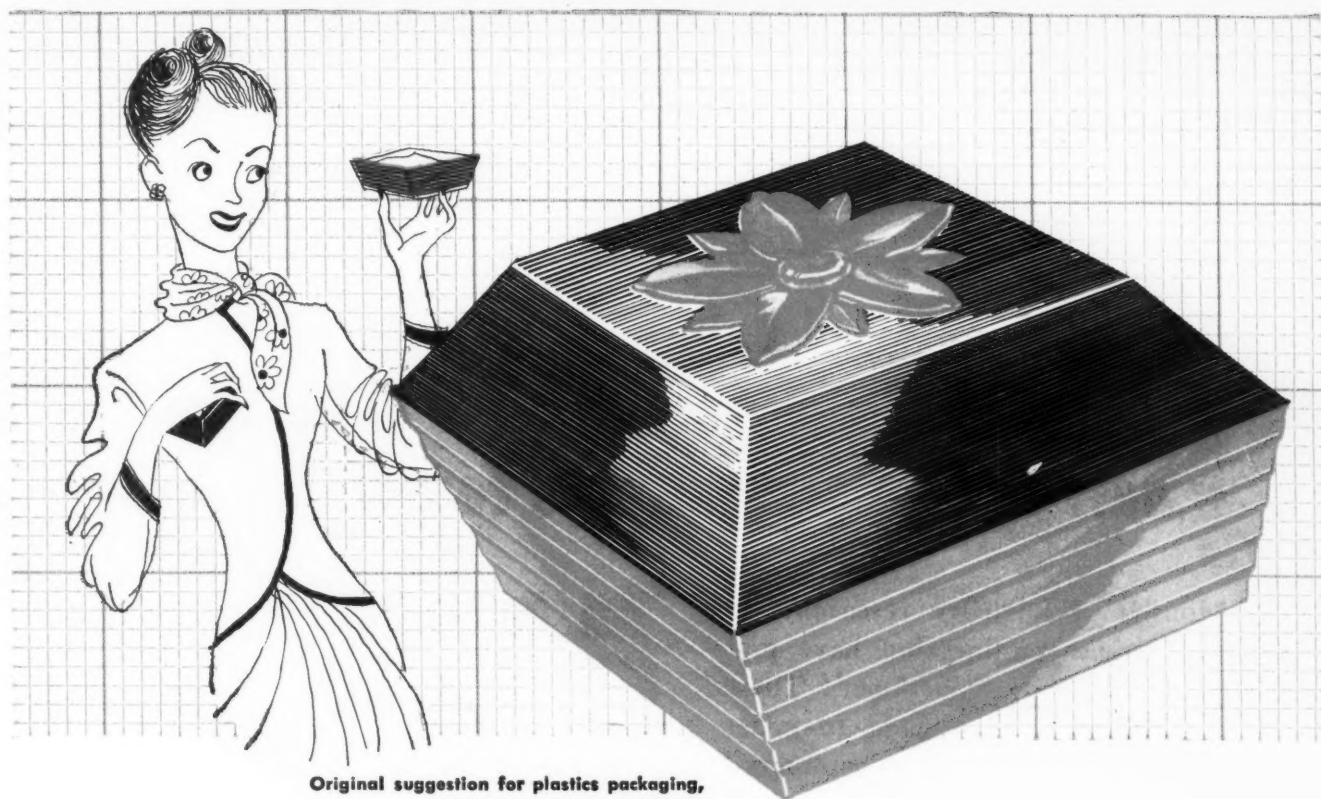
Moldproof wraps for drug product

QUESTION: *We are manufacturers of a drug product which contains a large amount of water-soluble material, as well as certain fats. This product is made in small tablet-like shapes. In the domestic market it gives us no difficulty with deterioration. However, we have had complaints of mold growth from the export market even though we use a foil overwrap and a friction-top metal can. Can you suggest a moldproof inner wrap to solve this problem?*

ANSWER: Your product is molding under tropical conditions of temperature and humidity because it is absorbing water vapor. Unfortunately there is no non-toxic moldproof agent sufficiently effective that, when wrapped around your product, it would offer protection under these conditions.

The way to solve your problem is to prevent moisture from getting to your product by improving the packaging. The easiest way to do this would be to use a unit wrapper consisting of a heat-sealed, coated aluminum-foil structure which would be sealed around each tablet with an external fin-type seal. For strength and decoration you would probably want to use a laminated foil-acetate combination with a heat-sealing coating on the foil side. This could be sealed around your tablets to make a package much like that used by the Quartermaster Corps during the war for the packaging of soluble coffee and drink powders. This package will carry your product through tropical storage and keep its moisture content below the point at which mold growth could occur.

DESIGNED AT NO. 1 PLASTICS AVENUE



Original suggestion for plastics packaging,
designed by General Electric

To make her Hanker for Handkerchiefs

A G-E PLASTICS PACKAGE

The ordinary handkerchief turns into an unusual gift in this enchanting plastics package, designed by General Electric. Here is a perfect example of how the package should *dramatize the product* for greater sales appeal. And regardless of what *you* manufacture, chances are you'll move it faster in a personalized plastics package.

General Electric can not only design, but can also mold and *produce* just the right container for your job. This *complete* service begins with the artists and engineers who tailor an original design to your particular requirements. Then your

design is fabricated in rich plastics by a corps of skilled craftsmen. Remember, too, that G.E. works with *all types* of plastics materials. You get the one that best suits your job.

Take advantage of this unique packaging service. If you plan to market a new product or stimulate sales of an old one, it pays to talk over your packaging problem with General Electric, the world's largest manufacturer of finished plastics products. *Write to Section AB-2, Plastics Division, Chemical Department, General Electric Company, 1 Plastics Avenue, Pittsfield, Mass.*

GENERAL  **ELECTRIC**

CD48-F1

EVERYTHING IN PLASTICS

We checked consumer preferences!
We canvassed packer demands!
We gave it top priority with our expert designers!

We introduce the

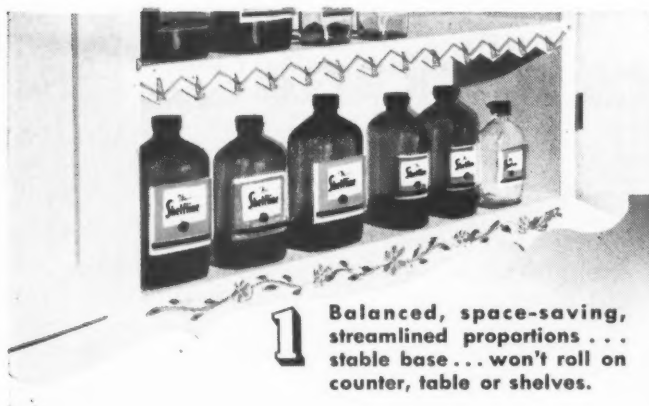
a new line of Duraqlas containers

Months of intensive research, designing and engineering have produced our new "Shelfline." These squared oblongs are made-to-order—your orders and your customers'!

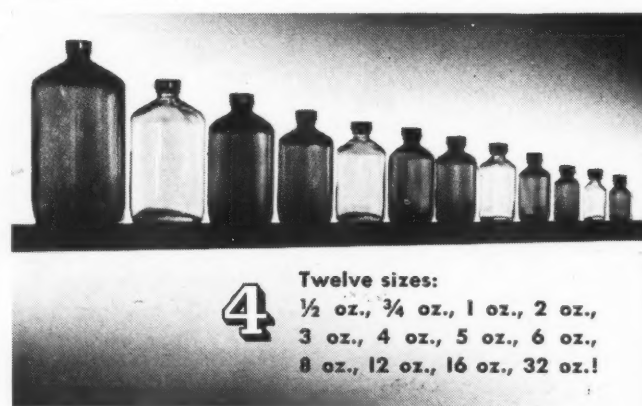
Here are the container advantages you and Mrs. Consumer told us you wanted—advantages which the new "Shelfline" offers:



3 Wide front and back panels for maximum label display... adequate space for side labeling if desired.



1 Balanced, space-saving, streamlined proportions... stable base... won't roll on counter, table or shelves.



4 Twelve sizes: 1/2 oz., 3/4 oz., 1 oz., 2 oz., 3 oz., 4 oz., 5 oz., 6 oz., 8 oz., 12 oz., 16 oz., 32 oz.!



2 Easy-to-pour-from—new style shoulders act as a funnel...



5 Only four cap sizes required to fit all twelve sizes of the narrow neck line.

Shelfline!



⑥ *Three colors: emerald green, flint and amber to fit every need!*

You will find this new "Shelfline" adaptable to high-speed automatic filling and labeling equipment. It can replace many of your

present containers, simplifying and securing family identity throughout entire lines. Call on us—we can fill your needs *NOW*.

Duraqlas TRADE MARK REG. U.S. PAT. OFF. **CONTAINERS—PROTECTORS OF QUALITY**

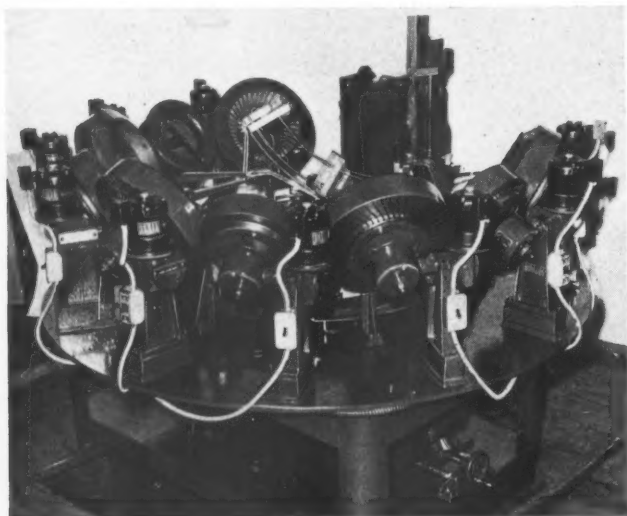
OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES



Equipment and Materials

FILLS ASSORTMENT OF ITEMS IN ENVELOPES

The Bartelt Engineering Co., Rockford, Ill., announces a new envelope-filling machine which places various combinations and quantities of screws, nuts and washers in envelopes, folds



the envelopes and staples them. It is claimed that the machine will fill and staple 2,400 envelopes per hr.

An inner table carrying the open envelopes revolves under nine Detroit power-screwdriver hoppers, each driven by a separate 1/4-hp. motor. Any one or a combination of hoppers may be put into operation at one time to give a quick selection of nine or more parts to be loaded into the envelopes. Automatic counters allow the desired number of pieces to drop into the envelopes. The machine is said to be adaptable to many assortments of small parts to be packaged in envelopes.

EMBOSSSED VINYL SHEETING

Vinyl plastic sheeting with deeply sculptured designs is available from the Vintex Corp. of America, New York. Known as "Plasti-Cast," it is offered in six embossed patterns, in a variety of colors, in roll form, 36 in. wide and 0.022 in. thick. It is said to be scuffproof and waterproof and may be sewed, heat sealed, stapled or cemented.

NEW STOCK BOTTLES FOR TOILETRIES

Latest addition to the Duraglas line of toiletry containers made by Owens-Illinois Glass Co., Toledo, Ohio, are the two 4-oz. oval bottles shown in the accompanying photograph. These containers are topped with the company's Empress plastic closure that lends a decorative note to bottles intended for cologne, creams, deodorants, after-shave lotion and many other products in the toiletry line.



CASINGS FOR FRESH AND COOKED SAUSAGE

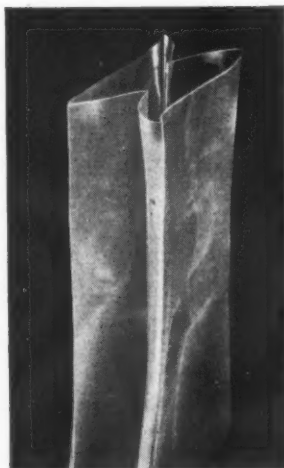
Milprint, Inc., Milwaukee, Wis., announces that it has acquired exclusive manufacturing and sales rights for Naturalux Pliofilm casings, which have been widely used by sausage manufacturers for fresh liverwurst and other fresh-cooked sausage products. Made of a special type of Pliofilm which is processed by the converter to give it special qualities necessary to conform to the product during processing operation, it is said to be non-porous, thus preventing moisture loss of contents during either processing or storage. This casing, it is also claimed, will prevent mold or slime formation even under prolonged storage conditions. It will be marketed under the name "Mil-O-Casing" and featured as a companion item to the company's Pilofilm "Mil-O-Seal" casing for cooked meats.

GUMMED TAPE SEALER

A new Lewis automatic tape sealer for tape widths up to 3 in. has been announced by the Lipton Mfg. Co., New York. It automatically feeds, moistens, measures, cuts off and delivers desired lengths of tape in one operation. Patented tape-measuring and stop adjuster are said to save up to 50% on gummed tape and many man hours by allowing more taping in less time.

POLYETHYLENE TUBING IN GUSSETED FORM

Plax Corp., Hartford, Conn., is now producing its polyethylene Layflat tubing in gusseted form. Available in continuous lengths and a choice of colors, the new tubing has the same advantages as the plain, flat tubing in that it is seamless, flexible and tough. It may be cold-stretched several hundred per cent and is said to be non-toxic, odorless, moistureproof and chemically inert. Because of these properties, the material has found usage in the food and chemical fields and now the gusseted form makes it more readily adaptable to packaging lines, since a separate gusseting operation is no longer necessary.



BOX AND BAG SEALER

Minnesota Mining & Mfg. Co., St. Paul, Minn., announces its production facilities have been accelerated to meet the growing demand for their Type M semi-automatic box sealer first shown at the Packaging Exposition in Philadelphia last April. This device applies "Scotch" tape to telescope-type boxes and to cellophane or paper bags by the single movement of the box or bag across the top of the sealer. The movement pushes a sealing mechanism which applies a 1 1/2-in. strip of tape to the side of the box cover and the bottom of the box, while auto-

HOW **ROSS** CARTONING MACHINES CAN *Slash* CARTONING COSTS!

Users of Ross cartoning machines aren't penalized by *expensive* downtime when making a carton size changeover, for Ross machines are designed to handle a wide range of various size cartons. There are no parts to remove or replace during a conversion. It's done by simply adjusting movable units permanently built into the machine bed. Any semi-skilled operator can make the changeover in a few minutes time.

Ross machines are built of standardized precision parts, made to close tolerances. Vital moving parts are self-oiled. Master Speed-ranger control provides maximum flexibility.

Ross machines are available in both semi-automatic and fully automatic types. Write for full information about these smooth operating, gentle handling cartoning machines. Learn how they will slash cartoning costs, save money for you.

Send the coupon today.



ROSS SEMI-AUTOMATIC CARTONING MACHINE

Sets up cartons of various sizes and tuck seals one end ready for hand loading or hand filling at rates in excess of 120 cartons per minute.



LIKE A RADIO!

TO CONVERT FROM ONE SIZE CARTON TO ANOTHER

Illustrated are two of the several adjustable compounds on a Ross machine bed. Adjustments for carton size are made against numbered scales guided by calibration charts furnished with each Ross cartoning machine.

A. H. ROSS COMPANY, Inc.

PACKAGING MACHINERY

Subsidiary of Rockwell Manufacturing Company

Box 998, Dayton 1, Ohio



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Box 998, Dayton 1, Ohio

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Gentlemen:

Please send me, without obligation, your complete engineering and performance data on Ross ☐ semi-automatic or Ross ☐ automatic machines.

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Creative — means the finest decoration on your glass, plastic or metal container —

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Beauty-Pak
TEXTILE PACKAGINGS

①

A complete line of packagings serving the Hosiery and Textile Industries, including chemically-neutral inserts, embossed glassines, cellophane envelopes. "Beauty-Pak your products"

THE *Milgate*
Line

②

Hot-melt coated and/or laminated papers, cellophane, films, laminated greeting card, lamp shade and functional papers; heat-seal label papers; frozen food papers; decorative wrapping and shelf paper.

"Milgate, your assurance of quality"

Paksure
FOOD PACKAGINGS

③

A complete line of wrappings, bags, envelopes and boxes, in cardboard, pliofilm, laminated papers, etc., for all food packagings including frozen foods. Stock or original packagings. "Be sure with Paksure"

Packaging Division 784 Public Ledger Building
E. W. Twitchell Incorporated Philadelphia 6, Pa.

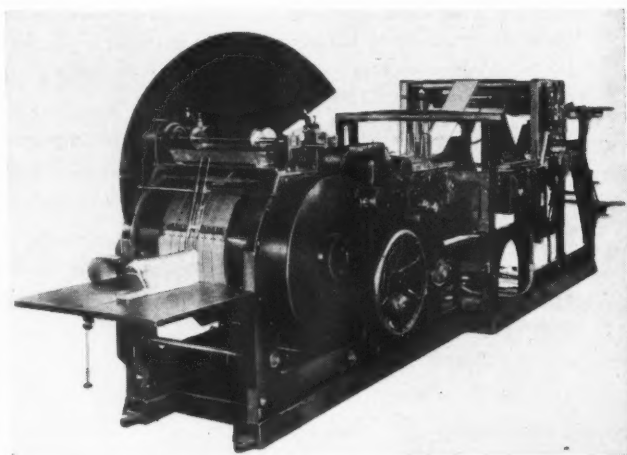
Equipment and Materials

(Continued)

matically indexing the same length of tape in position for successive applications. It will accommodate cellulose tapes, locker tapes and acetate fibre tapes up to 1/2-in. wide for varying packaging applications.

BAG MAKING MACHINE

Manhasset Machine Co., Mineola, N. Y., announces the availability of a new type, high-speed machine for making bags in a range of sizes from 1 1/2 to 12 in. in width and from 6 to approximately 20 in. in length. It is said to handle various



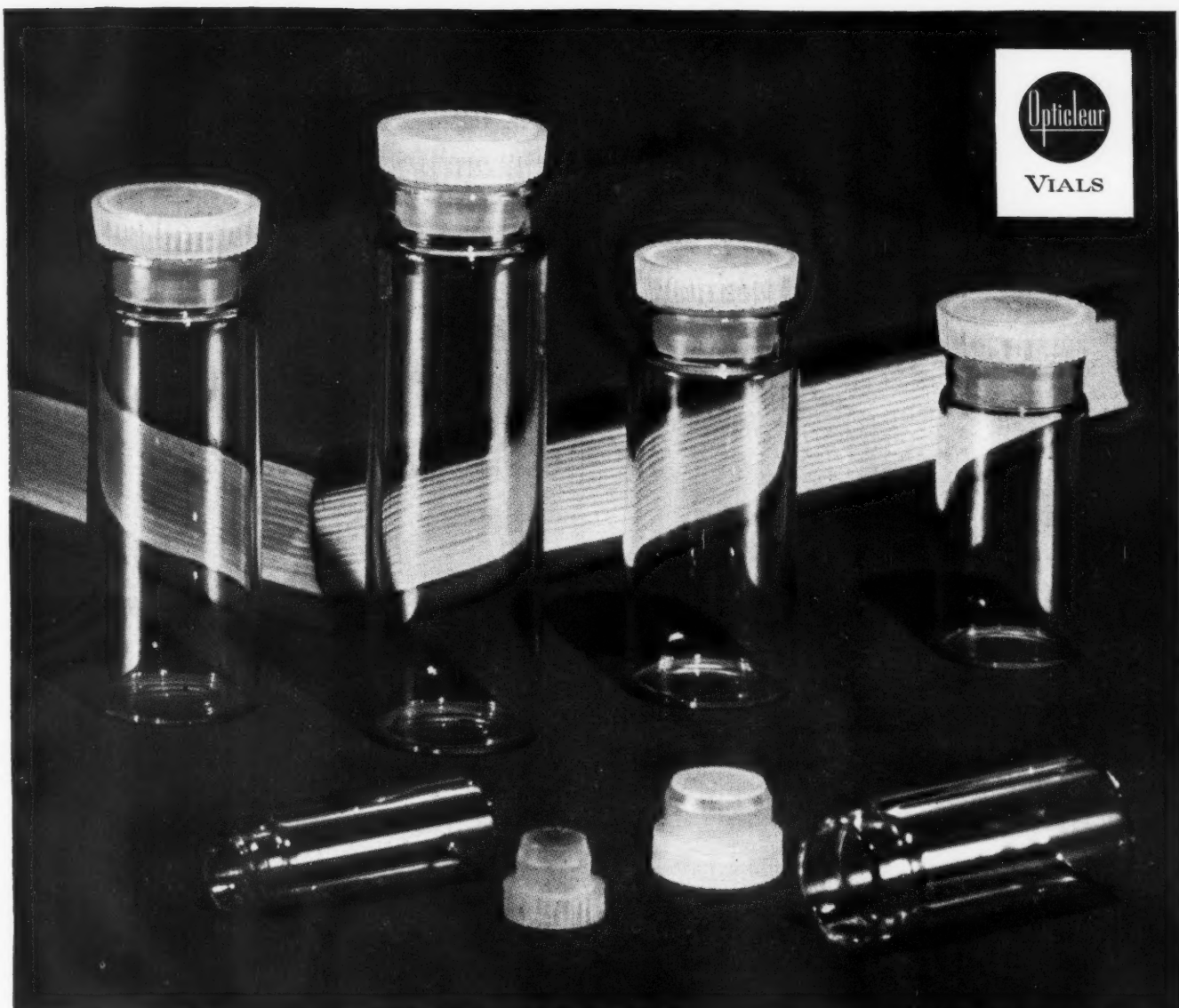
types of paper without tapes, as well as foil webs, and to have a speed range of up to 1,200 bags per min. The manufacturers claim several new patented features are incorporated, among which are: slower machine speed with higher production output, by changing striker speed instead of web speed through draw rollers; fewer change gears required, since most change gears permit two tube lengths; only one striker blade need be adjusted for proper shearing, the other three being automatically adjustable. Floor space required for machine completely equipped is 6 ft. 7 in. by 18 ft. 10 in.

VIBRATED HOPPERS ON VOLUMETRIC FILLERS

The Stuyvesant Engineering Co., Lyndhurst, N. J., announce that their three Fillmaster package-filling machines recently launched (see MODERN PACKAGING, Oct., 1947, p. 194) now incorporate electric-vibrated hoppers. These new models, it is said, provide a control for obtaining the exact vibration necessary for the filling of dry or semi-dry products by eliminating damage to those that are delicate, while at the same time overcoming the bridging of those that are sluggish. It is claimed they have greater accuracy and higher speed.

VERSATILE AUGER PACKER

Triangle Package Machinery Co., Chicago, is offering an auger packer, Model U-1, for filling non-free-flowing dry products in cans, cartons, bags, jars and bottles in a variety of sizes. This all-purpose filler, re-engineered to meet packer's demands made over a period of years, is said to eliminate approximately 98% of the dusting normally experienced. It requires but one unskilled operator whose only task is to place the empty container on a filling platform, the subsequent operations being performed automatically. An elevator table lifts the



The New Kimble "Opticlear" Vials

Lustrous... Sparkling... Elegant...

—and as serviceable as they are attractive!

• You must *see* the new Kimble "Opticlear" Vials to fully realize how beautiful they are! The flawless distribution of glass and the gemlike luster preclude distortion of product. The new Kimble stoppers afford complete protection to the vials' contents—add greatly to the containers' ethical appearance.

The new stoppers are of featherweight translucent plastic. They form such a tight


seal with the vials' tooled necks that contents remain virtually moisture-free indefinitely. Continued re-use will not impair their sealing efficiency . . . yet opening and resealing require but slight effort.

You will want to see these new vials . . . to examine and test them. If you will let us know the sizes required for your product, we will be glad to send samples.

Specify Kimble for Assurance of Container Quality

KIMBLE GLASS TOLEDO 1, OHIO
Division of Owens-Illinois Glass Company





Trilsch

FANCY BOXES * JEWELRY CASES

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Personalize YOUR PACKAGE
WITH THE
"PACER" MODEL
HEAT-SEALER



EMBOSSES TRADE-MARK OR NAME RIGHT IN THE SEAL

Lend prestige to your package . . . individualize your product! No extra time . . . no extra labor . . . no extra material required. Name or trade mark can be embossed while bag is heat sealed in one simple operation! One of many exclusive features available with Heat Seal-It Equipment.

Automatic and Foot Power Heat Sealers; Rotary Heat Sealers; Hand Sealing Irons; Bag Making Machines

WRITE FOR CATALOG

HEAT SEAL-IT COMPANY
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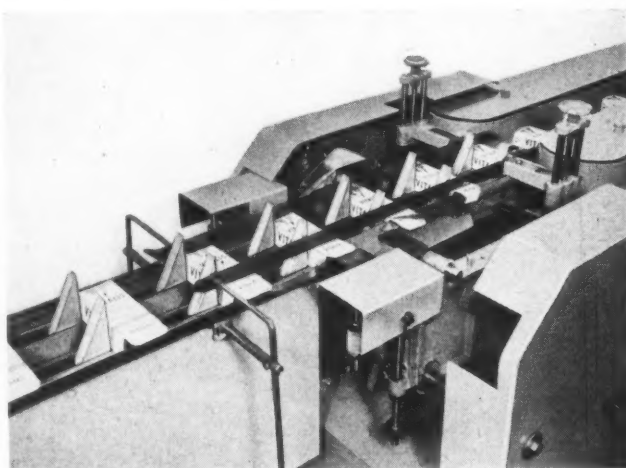
Equipment and Materials

(Continued)

empty container to a point where the auger and tube of the packer almost touches the inside bottom of the empty container. At this point the auger, which is incased in the tube, begins operation and forces the material into the container. By this action, a force is exerted which gradually pushes the elevator table downward until such time that the exact amount of material is packed into the container. The manufacturers claim users report speeds up to 30 packages per min., depending upon the product and size of container.

SEALS AND TUCKS CARTONS SIMULTANEOUSLY

Container Equipment Corp., Newark, N. J., announces the development and availability in the near future of a machine which automatically seals cartons at one end while it simul-



aneously tucks in the other end. It is quickly adjusted without tools for all carton sizes from 2 to 12 in. deep; is of simple construction, portable and incorporates a circulating glue-pump system. According to the manufacturer, the machine produces results comparable with highly specialized machines costing many times its price.

PRICES RISE ON TRANSPARENT FILMS

Celanese Corp. of America, New York, announces that the steadily rising costs on all of their raw materials have forced them to increase the selling price of Lumarith transparent film. The new prices, effective Jan. 15, represent an average increase of approximately 10% on most grades of film and sheet material.

VIBRATORY PACKER

Syntron Co., Homer City, Pa., announces a small, portable vibratory packer which may be used to fill completely small vials, jars, cartons or cans with bulk or fluffy materials such as powder, coffee, etc. This electro-magnetic device, with built-in variable-control power, has a 7-by-10-in. wooden deck standing 4½ in. high and weighs 13 lbs. Filled containers are placed on the deck or table and vibration causes the bulk materials to pack down more compactly. It may also be used by printers to jog 8½-by-11-in. sheets prior to cutting, feeding or binding.



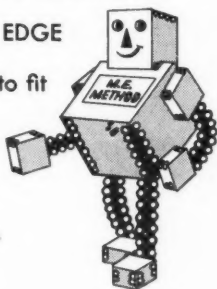
MODERN PACKAGING



TOUGH

IS A WORD FOR
METAL EDGE

Tough packaging assignments are Metal Edge's meat. What a fight these rugged Superfibre boxes, with their metal-stayed corners, put up to protect your product! And that goes for fragile, easily broken articles as well as for hard-to-pack items that break down ordinary packages. The METAL EDGE method is engineered to fit the individual business. There are hundreds of users—in 77 industries.



**NATIONAL METAL EDGE
BOX COMPANY**

334 NORTH 12TH STREET
PHILADELPHIA 7, PA.

Rayco Flock

Want to make your
new package a "Plush
Job"?

Use the new Coverings!

Use the new coverings made with Rayco Flock to make your new package pleasing to the eye and inviting to the touch. These rich flocked coverings are available from your supplier in all colors, on paper, cloth and cardboard for all box, wrapper and container purposes. And remember—to get the really fine effects of genuine suede leather, velvet, velour, etc., use the Rayco Flock specifically developed and proven for each job, specially processed under exclusive methods.

SUEDE FINISH - -

"Raymix"—a flock of rayon fibres under U. S. No. 427949 to produce a suede effect of utmost realism on any surface.

"Kingcote"—a cotton flock trademarked under U. S. Patent No. 423572, producing a suede effect at minimum cost.

PLUSH, VELVET AND VELOUR FINISH

"Raycote"—a flock composed of uniformly cut rayon fibres to produce on any surface a pile effect such as velvet, plush or velour. Made under U. S. Patent No. 2014947.

AVAILABLE IN ALL COLORS

REQUEST FREE COLOR CARD
and FREE WORKING SAMPLES



110 Tremont St.

Central Falls, R. I.



and right is RIGHT! In tough, lightweight Poly-T, Material of the Future, Tupper Seals offer the *practical* closure for any packaging operation.

Your product may be wet or dry, hot or cold, large or small. From coffee to chemicals—it makes no difference to versatile, air- and liquid-tight Tupper

Seals. They're flexible and self-sealing — attractive — economical for use with any circular container.

Tupper Seals are virtually indestructible — designed to withstand temperatures from below freezing to near boiling point; to absorb the roughest handling without chipping or cracking.

TUPPER GIVES YOUR PRODUCT THE PACKAGE THAT IS THE PREMIUM!

- We custom-manufacture Tupper Seals to individual order. Tupper Seals available now for immediate delivery.

TUPPER

Tupper creates all kinds of containers, with or without the famous self-fastening, air- and liquid-tight Tupper Seal — utilizing exclusive Tupper Poly-T, Material of the Future. Can't break, chip or crack — Featherweight and flexible — Tasteless, odorless, non-toxic — Sanitary, easily cleaned!

Write today for catalog and complete details— c/o Dept. A, Tupper Corporation

TUPPER CORPORATION, FARNUMSVILLE, MASSACHUSETTS • NEW YORK SHOWROOM, 225 FIFTH AVENUE

© 1948 TUPPER CORPORATION*

Your Product-too...

...CAN BE MADE A SUCCESSFUL
HOLIDAY GIFT PROMOTION...

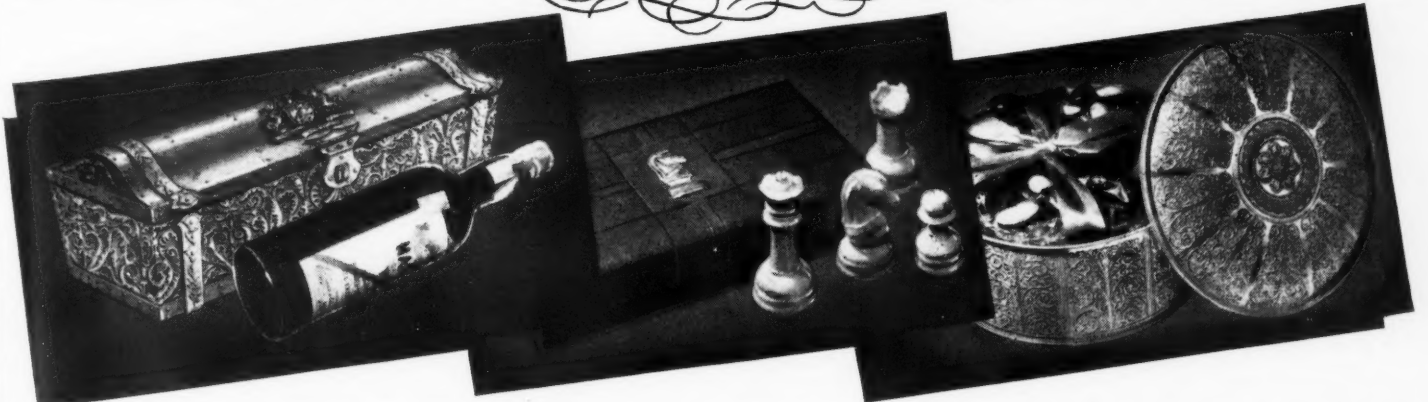
EXTRA DOLLAR-VALUE * PRESTIGE BUILDING * GOODWILL ADVERTISING



BEAUTIFUL RE-USE

Guildcraft

GIFT CONTAINERS..



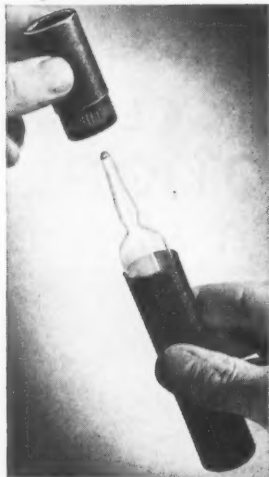
FREDERICK A. KRAUSE AND ASSOCIATES

8 S. DEARBORN ST.

CHICAGO 3, ILL.

New

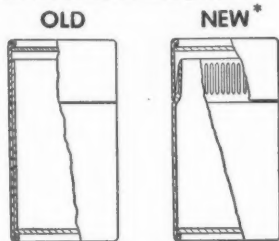
SAFETY BOX FOR LICKING TOUGH PACKAGING PROBLEMS



Boxes are ideal for packing anything with a fragile end or with a point that requires protection. Boxes can be made to lock contents in position to prevent damage.

These new tubular boxes have an unique construction which makes the cap tight-sealing even after being removed and replaced many times.

Ask for samples and prices.



Ampule is locked in place and really protected. Unique construction holds ampule at shoulder leaving constricted neck riding in air.

BODY TAKES SHOCK. RESULT:
NO BREAKAGE

NIEMAND BROS. Inc.

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Long Island City 1, N. Y.

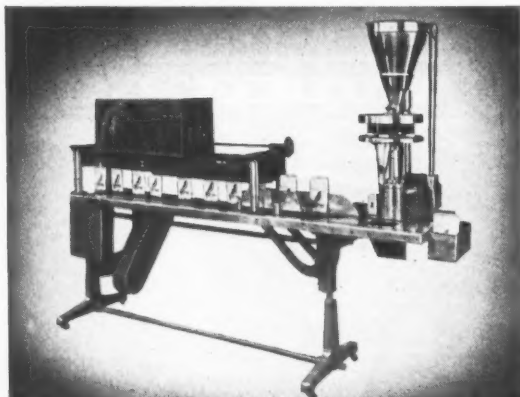
RAvenswood 8-0909

KINKS IN YOUR PACKAGING LINE?

Our job is to supply standard equipment to do standard packaging jobs like wrapping, sealing, conveying and filling.

We also design and engineer efficient packaging systems and design and build special machinery for special packaging needs.

If you need any kind of help in setting up or modifying a packaging operation, we'd like to consult with you.



This compact filling and sealing set-up for coffee bags is low in cost, easy to operate. Speeds of 35 to 40 bags per minute with one unskilled operator.

WRAP-ADE MACHINE CO.

778 Bergen Street

Brooklyn 16, New York

Phone: NEvins 8-8052



For Your Information

A record attendance is expected at the 1948 **National Frozen Food Industry Convention and Exposition** to be held at the Stevens Hotel, Chicago, March 15 to 18, according to the **National Assn. of Frozen Food Packers**, based on the requests for hotel reservations that have come in to the association's offices at 1415 K St., Washington, D. C. Over 50 major companies supplying the frozen-food industry with equipment and materials have completed plans for participating in the Exposition. Developments in transportation, technology and merchandising will receive special emphasis during the convention.

Cooperating in program arrangements are the **National Food Brokers Assn.**, the **National Wholesale Frozen Food Distributors, Inc.**, and the **Quick Frozen Foods Assn.** of Chicago. The Exposition will open at 10 A. M. each day and will remain open until 5:30 P. M. on Monday and Wednesday, 10 P. M. on Tuesday and 3 P. M. on Thursday.

The annual meeting of **The Society of the Plastics Industry** will be held May 20 and 21 at Atlantic City, N. J. **William T. Cruse**, executive vice president of SPI, states that a decision has been reached to hold the Conference separately from the National Plastics Exposition to enable the industrial and commercial leaders to concentrate entirely upon the Conference meetings. Merchandising, technical and business sessions will be held at the Ambassador Hotel, Conference headquarters. Hotel-reservation forms and program announcements will be issued soon.

The **Third National Plastics Exposition** will be held at Grand Central Palace, New York, from Sept. 27 to Oct. 2. Announcement of plans for the show and applications for exhibition space will be sent out in advance. Although there may be a few meetings during the Exposition, the main business sessions of the year for the plastics industry will be in Atlantic City in May.

The **American Designers' Institute**, New York, announces the election of the following new members to its national board of trustees: **Ruth Gerth** of San Francisco, **Henry Glass** of Chicago, **Harper Richards** of Chicago, **C. E. Waltman** of Chicago, **Scott Wilson** of New York, **Edward Wormley** of New York, **John Vassos** of New York, **George Kosmak** of San Francisco and **Fritz Foord** of New York.

At their first meeting, held in conjunction with a three-day series of events marking the 10th anniversary of the Institute, the trustees elected the following national officers to serve during the year 1948: **John Vassos**, presi-

What's doing

Feb. 15-19—**American Institute of Chemical Engineers**, regional meeting, Roosevelt Hotel, New Orleans, La.

Feb. 25—**Waxed Paper Institute**, annual meeting, Waldorf-Astoria Hotel, New York.

Mar. 15-18—**National Assn. of Frozen Food Packers**, 2nd annual convention, Hotel Stevens, Chicago.

Apr. 26-30—**American Management Assn. Packaging Exposition and Conference**, Public Auditorium, Cleveland.



You can tell a book by its cover ...
when it's displayed in Kodapak Sheet

Today, many booksellers keep their choicest titles protected in Kodapak Sheet.

They do this because this tough, optically clear plastic material makes attractive, individual display cases that aid in faster selection... at the same time, serving as excellent protection against dust and handling.

Kodapak Sheet is supplied in two basic forms: Kodapak I, cellulose acetate, in gauges from

No. 88 (0.00088") to 20 thousandths (0.020"). Kodapak II, cellulose acetate butyrate, in gauges from No. 90 (0.00090") to No. 200 (0.00200").

The facilities of the Kodapak Demonstration Laboratory in Rochester are available to show fabrication possibilities and practical uses of Kodapak Sheet.

**Cellulose Products Division
 Eastman Kodak Company, Rochester 4, N. Y.**

FOR THE DISPLAY YOU WANT ... THE PROTECTION YOU NEED

Kodapak Sheet

T. M. Kodapak Reg. U. S. Pat. Off.

Kodak



the Taber THERMOCREASER

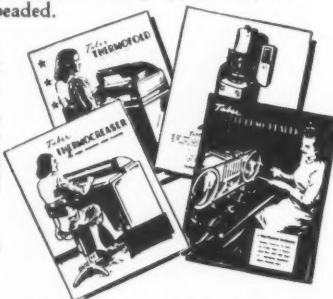
You get more creases in less time, with the Taber Thermocreaser. That's because of the Thermocreaser's "quick crease" action, from its accurately heated, thermostatically controlled creasing blade that presses the material into a metal forming die or a resilient rubber pad to produce a perfect 90° angle.

Through its special two-blade feature, the Thermocreaser is equipped to handle a variety of creasing jobs. It is particularly well adapted to production of transparent set-up type boxes, from die-cut blanks, either plain or beaded.

Length of creasing blade 31". Capacity Thermoplastic sheet .005"-.020" thickness.

Our consultation service covering a complete plant installation is available to help you with your planning. Send your problem to us!

Write for full information on Taber Plastic Fabricating equipment for



FOLDING -- DEEP DRAWING -- BEADING

Taber

INSTRUMENT CORPORATION

119 GOUNDRY STREET

NORTH TONAWANDA, N. Y.

For Your Information (Continued)

dent; **Ernest Swarts** of Rockford, Ill., vice president; **Ann Franke** of New York, secretary; **Lionel Algoren** of Chicago, treasurer.

The manner in which industrial design can aid industry in meeting today's competitive market is discussed in an illustrated brochure available from **Design Associates, Ltd.**, 1 E. 53rd St., New York.

A new edition of the catalog on the multiple-piston "Geyer" filling machine has just been published by **Filler Machine Co.**, 30 Church St., New York. It covers a wide range of products in the food, cosmetic and drug fields and lists specifications for large-scale and minimum-production requirements.

Of special interest to the packaging field is a new reference work, **"The Chemistry and Technology of Waxes,"** by **Albin H. Warth** of **Crown Cork & Seal Co.**, devoted exclusively to waxes and collating a mass of technical information heretofore unavailable in book form. Published by **Reinhold Publishing Corp.**, 330 W. 42nd St., New York, the book is available at \$10 a copy.

Manufacturers of all types of packaged products will find points of interest so far as merchandising is concerned in the new book, **"Planning the Product,"** by **D. M. Phelps, Ph.D.**, of the **University of Michigan**. One chapter is devoted exclusively to packaging, and labeling, market testing and trademarks are treated at length. Priced at \$4.50, the book is obtainable from the publisher, **Richard D. Irwin, Inc.**, 3201 S. Michigan Ave., Chicago.

Polytechnic Institute of Brooklyn started its second group of 15 lectures in pulp and paper technology on Feb. 4. Formerly a one-year course, it is being presented for the first time this year as a one-semester course.

The Howard Flint Ink Co., Detroit, Mich., is now distributing a new Color Selector displaying 110 colors and blacks. Selected by a group of color experts, the individual colors were chosen on the basis of past popularity and postwar development. They are arranged so that all are instantly visible for close comparison. Copies are available without charge on request to the firm.

Kay, Inc., creators of displays, New York, have arranged an exhibit of their point-of-sale material featuring those displays which have attained the highest degree of dealer acceptance, the most desirable store positions and the longest period of sustained showing. The exhibit, being held currently at the **Penthouse Gallery**, 9 E. 40th St., New York, is open Tuesdays through Fridays from 10 A. M. to 5 P. M.

Marathon Corp., Menasha, Wis., has prepared a small, handy desk calendar designed to promote food packaging, each page of which carries an authoritative quotation on packaging. Copies are available on request to the firm.

An illustrated booklet covering the history and development of metal cans for packaging drugs and cosmetics has just been issued by the **Can Mfrs. Institute** under the title **"Can Cavalcade in the Corner Drugstore."** Copies in limited quantities may be obtained by writing to the Institute, 60 E. 42nd Street, New York.

THE RODGERS FILLER *saves money 3 ways*

1. BECAUSE IT DOES MANY FILLING JOBS

Handles all pastes and powders. Fills containers from 1/2 ounce to ten pounds, either rigid or flexible.

2. BECAUSE IT OPERATES FASTER

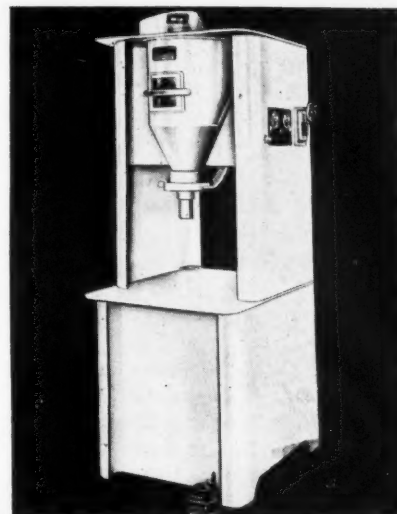
Fills up to 60 containers per minute. Changes from a 1 ounce to a ten pound package in 10 seconds—without tools or mechanic. All parts ride on sealed ball bearings.

3. BECAUSE IT COSTS LESS TO MAINTAIN

All moving parts are located above fill tube and can't be clogged by powder or paste. Special design eliminates clutch breakage and overheating.

Automatic attachments and conveyors can be supplied with this filler.

Our free descriptive Bulletin M-1 will give you more information about the cost-cutting ability of the Rodgers Fillers. Write for it today.



Model 6-A Tube and Jar Filler
Hand operated. Fills 20 to 30 tubes or jars per minute. For pastes, ointments, semi-liquids.



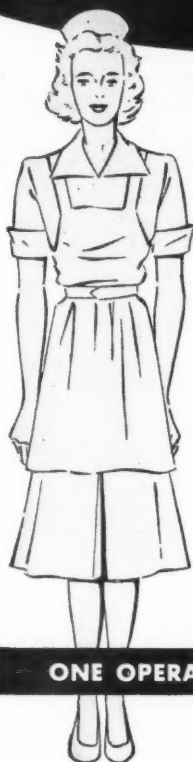
OTHER RODGERS PRODUCTS

Stainless Steel Tanks	Conveyors
Stainless Steel Kettles	Powder Mixers
Tube Clips	Portable Agitators
Tube Closers	Centrifugal Pumps

GEORGE G. RODGERS COMPANY, INC.

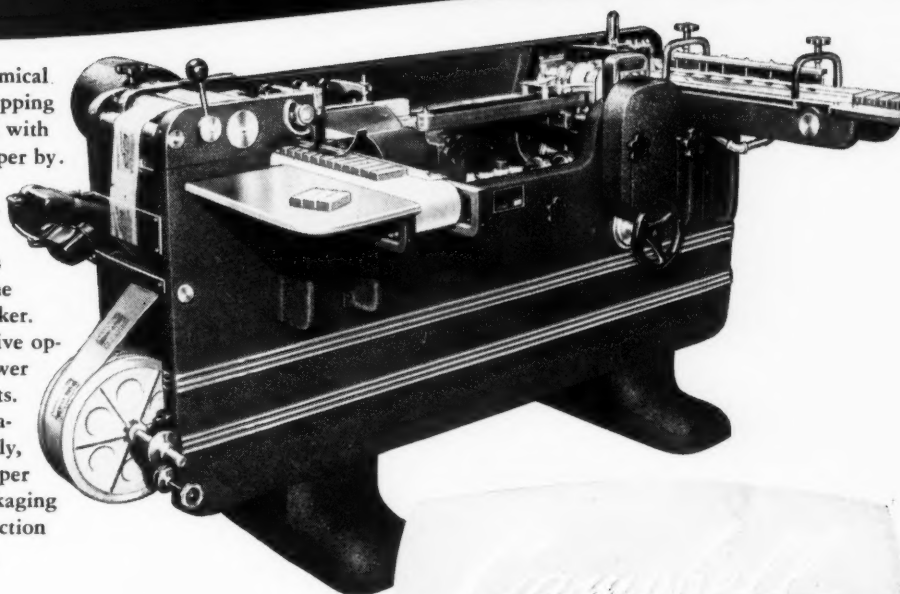
225 WEST 34th STREET, NEW YORK 1, N. Y.
PHONE: BRyant 9-2040

SAVE...TIME·MONEY·LABOR AND MATERIALS!



HIGH speed, economical operation with wrapping perfection is assured with the Campbell Wrapper by.

1. More units per minute — 120 minimum guarantee.
2. Fewer operations and operators — one feeder and one packer.
3. Less non-productive operating hours.
4. Fewer machine adjustments.
5. Less wrapping materials required. Truly, the Campbell Wrapper is a triumph in packaging that increases production and decreases cost.



ONE OPERATOR IN PLACE OF FIVE

Write for illustrated brochure giving full details.

**CAMPBELL
WRAPPER**

HUDSON-SHARP MACHINE CO. • GREEN BAY, WIS.
Manufacturers



Plants and People

The stockholders and board of directors of the **United Paperboard Co.** have voted to change the company name to **United Board & Carton Corp.**, to describe more adequately the increased scope of the firm's activities. No change of address, officers or policies is contemplated.

James H. Blunden has been appointed sales manager of United's **Lowman Folding Box Division** and will be in charge of sales in the Syracuse territory.

Directors of **E. I. du Pont de Nemours & Co., Inc.**, announce the election of **Crawford H. Greenewalt** as president, **Walter S. Carpenter, Jr.**, as chairman of the board of directors, **Walter J. Beadle** as a member of the Executive Committee and **T. C. Davis** as treasurer. Mr. Carpenter's resignation as president and his designation as chairman of the board followed the retirement of **Lammot du Pont** from the latter post.

James C. Bjorkholm has been appointed advertising manager of the **Foil Division of Reynolds Metals Co.**, Richmond, Va. Mr. Bjorkholm, who was formerly with Reynolds' Aluminum Division in Louisville, has been associated with the firm for three years.



J. C. Bjorkholm

Announcement has also been made of the appointment of **Milo R. Gerow** as product manager of Reynolds' **Plastics Division**. Mr. Gerow will be in charge of plastic film sales, development and production, with headquarters in the New York office.

The board of directors of the **D. L. Ward Co.**, paper distributors, Philadelphia, has elected **John D. Williams** as vice president in charge of sales and **Caleb J. Brinton, Jr.**, as assistant treasurer. The firm now occupies the entire second floor of the Terminal Commerce Bldg., 401 N. Broad St.

Employees of the **McLaurin-Jones Co.**, paper converters, Brookfield, Mass., recently presented **John MacLaurin** with a bronze and gold-leaf plaque to mark the 40th anniversary of his connection with the firm, founded by Mr. MacLaurin and his brothers in 1907.

Container Corp. of America, Chicago, plans to erect a new plant in Muskogee, Okla., to produce corrugated shipping containers. With approximately 25,000 sq. ft. of floor space, the new building will be erected through the co-operation of the Muskogee Industrial Foundation. **J. R. Neil**, general manager of the firm's Southwest Division in Fort Worth, Tex., will supervise operations of the new property.

R. P. Peters, managing director of **The Three Ply Barrel Co.**, and **Herbert Currie**, managing director of **Acme Box Co., Ltd.**, both subsidiaries of the **Bowater Paper Co.**, London, England, are spending a month in the United States visiting container plants and machinery manufacturers.

A new agency to specialize in the advertising and merchandising of pulp, paper, paper products and packaging materials has been established by **Stephen Goerl**, formerly with Bulkley-Dunton. The firm name is **Stephen Goerl Associates**, with offices at 22 E. 40th St., New York.

James T. Growley of the **Plastics Division of Celanese Corp. of America**, New York, has been elected president of the **Newark Section of the Society of Plastics Engineers**.

Richard H. Leeds has been appointed to the sales staff of **Einson-Freeman Co., Inc.**, lithographers, Long Island City, N. Y. **Earl Shuman** succeeds Mr. Leeds as assistant to the firm's president.

With the formation of separate departments to handle corks and drug sundries, the Glass and Closure Division of **Armstrong Cork Co.**, Lancaster, Pa., announces the following personnel changes: **E. F. Ebberts** will manage the **Corks Department**, assisted by **Ralph Acklin**; **George M. Scattergood** will be manager of the **Drug Sundries Department**, assisted by **W. W. Pedrick**.

Mosstype Corp., manufacturers of printing equipment, have acquired a new plant annex at 837 Union St., Brooklyn, where all roller production is being concentrated. General offices of the firm remain at 33 Flatbush Ave., Brooklyn.

A. P. Ogilvie has been appointed by **Western Products, Inc.**, of Newark, Ohio, as district manager for Wisconsin and Illinois. His headquarters are in the Chicago office and he will handle sales of the company's plastic packages, printed cellophane and frozen-food packages.

The American Paper Goods Co., New York, announces the election of **Dale M. Walker** as assistant treasurer. Mr. Walker has been associated with the Western division of the company for 17 years.

A. J. Luckman has been appointed representative for the **Oscar Trilsch Co.** of Whitestone, N. Y., in the states of Washington, Oregon and California, with headquarters at 433 S. Hill St., Los Angeles.

Announcement is made of the merger of **Champagne Paper Corp.** with **Ecusta Paper Corp.** The former company now becomes the **Champagne Paper Division of Ecusta Paper Corp.**, Pisgah Forest, N. C.

American Machine & Foundry Co., New York, presented 20-year service pins to 26 new members at the fifth annual meeting of the company's Twenty-Year Service Club recently.

Joseph W. Scott has been appointed sales manager for **Cellu-Craft Products Corp.**, cellophane converters and printers, Flushing, N. Y.

Container Laboratories, Inc., New York, recently sponsored a meeting in Chicago of its quality-control and re-

H & D BOXES

CREATED for utility



DESIGNED for merchandising

Here is a versatile corrugated luggage-type box that can be used in the packaging of a wide variety of products. It is a triple use package. First, it adequately protects its contents in shipment. Second, it acts as a powerful sales tool in mass display. Third, it creates impulse sales and suggests "take-with" purchases and requires no additional packing for retail delivery. Such packaging is sound merchandising; it helps make a good product better; it stimulates sales. Consult the H & D Package Laboratory on ALL packaging problems.

HINDE & DAUCH

Craftsmen In Corrugated

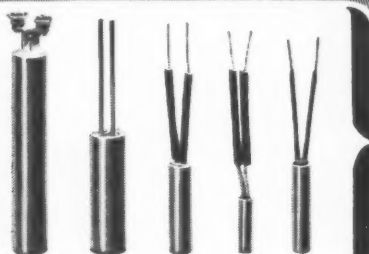
EXECUTIVE OFFICES: 4801 DECATUR ST. • SANDUSKY, OHIO

FACTORIES IN:

BALTIMORE 13, MD. • BUFFALO 6, N. Y. • CHICAGO 32, ILLINOIS
CLEVELAND 2, OHIO • DETROIT 27, MICH. • GLOUCESTER, N. J.
HOBOKEN, N. J. • KANSAS CITY 19, KANSAS • LENOIR, N. C.
MONTREAL, QUEBEC • RICHMOND 12, VA. • ST. LOUIS 15, MO.
SANDUSKY, OHIO • TORONTO, ONTARIO • BOSTON, MASS.



ELECTRICALLY HEATED MACHINES *are no better than their* **HEATING UNITS...**



be sure
they're
WATLOW
CARTRIDGE
UNITS

ACCURATELY FIT for BURN-OUT RESISTANCE RUGGED CONSTRUCTION for MAXIMUM LIFE

These extremely compact units of highest efficiency are accurately formed to true diameters for precise fit to insure maximum heat conduction with fewer burnouts.

Rigid terminals or durable flexible leads. Brass, steel, and nickel alloy sheaths. Dia. $\frac{3}{8}$ " to $1\frac{5}{16}$ "; densities 10W to 45W psi; temperatures up to 900°+.

Send for Catalog on Industrial Heating Elements



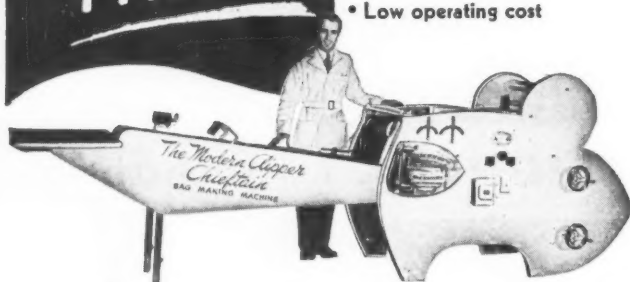
WATLOW

ELECTRIC MANUFACTURING COMPANY
1340 N. 23d St. St. Louis 6, Mo.

MAKE BAGS FAST

Up to 10,000 Per Hour

- Fast changeover time
- For small and large quantities
- Low operating cost



The "Chieftain"—new Modern Clipper machine—represents a brand-new design in bag-making machines. It makes flat and square bags of all heat-sealing materials; cellophane, Pliofilm, foil and plastics—with a speed and efficiency never before equalled. No skilled operator is needed. Easy to operate, precise and economical. Has center seam gluing and duplex bag making attachments.

HEAT SEALS

Because a proper heat-seal keeps out and keeps in all atmosphere, it gives you certain sift-proofing and leak-proofing. There is no seal that can compare with a heat-seal for protection... no machine that can rival the "Chieftain" for versatility and high-speed operation.

MODERN CONTAINERS CO.

3920 E. Olympic Blvd.

Los Angeles 23, Calif.

Plants and People

(Continued)

search clients, a group of some 65 corrugated box plants. A similar meeting was held for the benefit of Eastern members in New York last month.

Howard A. Marple becomes director of the newly created advertising department of **Monsanto Chemical Co.**, St. Louis, with **R. Allan Gardner** as assistant director. Mr Marple, who has been with the company since 1937, was formerly editor of *Monsanto Magazine* and manager of trade advertising.

Dr. Charles Allen Thomas, executive vice president and technical director of Monsanto, has been unanimously selected to receive the 1948 gold medal of **The American Institute of Chemists** in recognition of his work in the development of atomic energy, his leadership in research on synthetic resins and for his encouragement of basic research.

Palmer J. Lathrop was elected a vice president of **Bristol-Myers Co.**, New York manufacturing chemists, at a recent meeting of the board of directors.



P. J. Lathrop

Mr. Lathrop, formerly an assistant vice president, is manager of the company's Hillside, N. J., plant and has served as a judge of **MODERN PACKAGING'S** All-America Competition.

Roy Klenert, former sales engineer in the New York office of **Edward Ermold Co.**, manufacturers of automatic bottle-labeling machines, has been appointed district sales manager with headquarters in Chicago. The district includes Iowa, Minnesota and Wisconsin and parts of Illinois, Indiana and Michigan.

Wortendyke Mfg. Co., makers of paper products, Richmond, Va., announce that **Eugene B. Luck**, vice president, has been elected a member of the board of directors. **J. Rucker Ryland** has been elected a vice president and **A. L. Waldrop** is now secretary and treasurer.

John H. Heuer has been appointed as assistant to **Fred C. Goodwill**, technical director of the printing, publication and converting paper division of the **St. Regis Paper Co.**

Wayne Roberts has been appointed sales manager of the **Acorn Packaging & Packing Corp.**, New York.

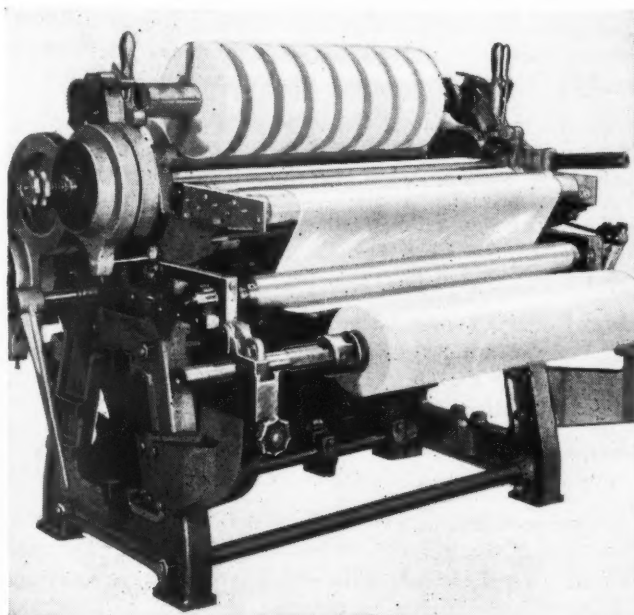
Roland J. Lachapelle has been appointed manager of the Boston office of **E. P. Lawson Co., Inc.**, makers of paper-cutting machinery and bindery equipment.

Bemis Bro. Bag Co., St. Louis, Mo., announces the appointment of **Elwood M. Proctor** as manager of its Seattle, Wash., plant and **Robert Highley** as manager of the New York General Sales Division.

Edward Miller, who was recently connected with **James Gray, Inc.**, and **Carl Jacobs**, a specialist in cellophane and glassine envelopes and bags, have acquired a major interest in the **Perry Envelope & Bag Co.** at 200 Hudson St., New York.

The Rapids-Standard Co., Inc., material handling equipment manufacturers, announce the new location of their

Camachine 24-7 for top quality rolls of CELLOPHANE



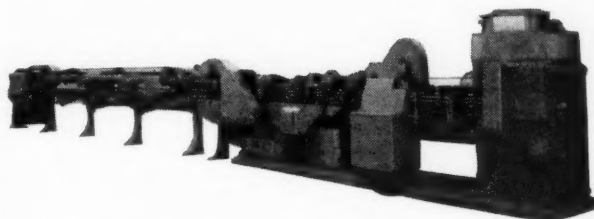
Camachine 24-7, Cellophane Slitter, is especially designed for fast production of accurately measured, uniformly rewound rolls of cellophane and similar materials. The delicacy of these materials and their lack of uniformity in thickness require extra care in slitting and rewinding. Top quality rolls produced by Camachine 24-7 mean more economical performance in later processing operations. Camachine 24-7 handles webs up to 50" in width at speeds up to 250 fpm, producing top quality rewound rolls up to 16" in diameter, and slitting strip as narrow as 1/2". Special slitter units can be furnished for cutting 1/4" strip. Write for illustrated literature.

Cameron Machine Company, 61 Poplar Street, Brooklyn 2, N.Y.

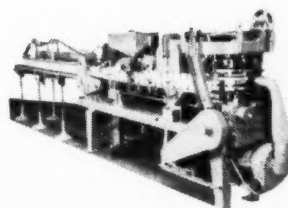
Camachines
FOR FAST, TOP QUALITY ROLL PRODUCTION
...the world over



NEVERSTOP CARTON FILLER & SEALER



Model "A" High Speed Carton Filling and Sealing Machine. Production 160 per minute.



Model "E" Carton Filling and Sealing Machine. Production 60 per minute.

The "Neverstop" automatically feeds and seals cartons while in continuous motion, so that high speed production is obtained with slowly moving mechanisms. Volume filling is also accomplished without stopping the moving carton.

The "Neverstop" is extremely adaptable. Weighing or auger feed filling machines can be combined with the "Neverstop" when materials require their use. For free flowing materials having nearly constant volume per pound, the filling mechanism is incorporated in the machine, securing the advantages of less cost and floor space. For smaller cartons a made-up bag (liner) may be automatically fed and inserted into the carton before filling and, afterward, automatically folded and crimped or heat sealed.

The "Neverstop" Machines are furnished for either hand or automatic carton feed. An extremely tight sea is assured, top and bottom, since both are made in the same way. All carton flaps are glued, the first wide flap folded being crowded over into the fold of the second wide flap as it is folded down.

Detailed information will be furnished upon request. A sample package will help in specifying equipment.

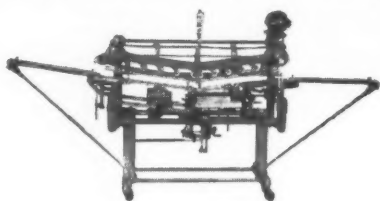
STOKES & SMITH CO.
PACKAGING MACHINERY PAPER BOX MACHINERY

FRANKFORD, PHILADELPHIA 24, PA., U. S. A.

FILLING · PACKAGING · WRAPPING MACHINES
Speeds to suit your needs—15-30-60-120 per minute

"Better machines for better packages"

Compare the Versatility of the New Way Labeler...



- Precision-built thruout with all parts machined.
- Patented aligning device to keep label centered.
- 27" width permits using in narrow passageways.
- Less lap-end paste required.
- Enclosed glue pot prevents contamination of glue
- Thermostatic heat controls.
- V-belt carriers run on beads of cans.
- Fully enclosed lubricated drives.
- Patented extra long seaming pad.
- Timing device for bale-ear cans or handled jugs.
- Fully adjustable between 1 3/4" to 6 11/16" diameters and 1 3/4" to 9" heights.
- Can be supplied for all-around or spot labels.
- Can be equipped with CRCO-New Way can marker.

Write for details and prices.



ROUND TUBES AND PACKAGES Available Now!

PACKARD offers spiral-wound round tubes and containers in all conceivable lengths and diameters—drum-shape, long, thin, flat. Sturdy and light-weight, PACKARD containers are perfect for any dry commodity—foods, drugs, chemicals, cosmetics, toys, novelties, insecticides, electrical products, shipping, textiles.

And these low-cost containers are available immediately! Whether you choose metal-end or paper-cap, plain or labelled—watch your product go in a PACKARD package.

PACKARD CONTAINER CORP.

5811 Park Avenue West New York, New Jersey
Phone Union 5-5818

Plants and People

(Continued)

sales and advertising departments at The Rapistan Bldg., Grandville, Market & Weston Aves., Grand Rapids, Mich.

The Exhibitors Advisory Council announces the election of Samuel Y. Hyde of American Can Co. as president, succeeding J. F. Apsey, Jr., advertising manager of the Black & Decker Mfg. Co., who has been named executive vice president.

Celluplastic Corp., Newark, N. J., has appointed as its regional sales representative for upper New York State the firm of Dygert & Stone, Inc., Rochester, N. Y.

George S. Hunt, formerly connected with Raymond Loewy Associates in New York City and London, has been appointed regional manager of the Los Angeles branch.

Announcement has been made of the appointment of Harry E. Weston as associate secretary-treasurer of The American Pulp & Paper Mill Superintendents Assn., Inc.

Dixie Wax Paper Co., Dallas, Tex., has marked its 25th year with an illustrated brochure titled "A Pictorial Report on the Progress of the Dixie Wax Paper Co."

Max Rothspan and Charles B. Haar have formed the Quality Box Co., Inc., 119 Sussex Ave., Newark, N. J., for the manufacture of fancy and plain boxes for dresser sets, flatware, cutlery, cosmetics and related items.

Nathaniel H. Freeman, maker of creative displays, announces a change of address to 542 Fifth Ave., New York.

Announcement has been made of the incorporation under the laws of the Republic of Panama of Shellmar International. The new corporation will facilitate the handling of matters pertaining to foreign operations of Shellmar Products Corp. of Mt. Vernon, Ohio. Foreign operations cover the same types of conversion of flexible packaging materials as are performed by the corporation in the United States.

Schoettle Industries, Philadelphia, has announced the election of new officers for its group of companies, necessitated because of the recent death of Edwin J. Schoettle, founder and president of the organization. Douglas T. Neale became president of the Edwin J. Schoettle Co., parent company of the group; also president of High Production Machine Co. and Precision Mfg. Co., machine manufacturing subsidiaries. Ferdinand P. Schoettle and Karl R. Schoettle were elected vice presidents of the parent company, while Edwin J. Schoettle, Jr., became vice president of both the machine and manufacturing companies. Two other subsidiaries in the paper-box manufacturing division are the John Crompton Adelpia Corp. and F. Schoettle Co., Inc. Ferdinand P. Schoettle was elected president of F. Schoettle, Inc., while Fred L. Andersen became president of John Crompton Adelpia. Mrs. Sara M. Schoettle, wife of the late president of the group, was elected chairman of the board of all companies.

John L. Dunnock, member of the executive staff of Swindell Bros., Inc., Baltimore, Md., died suddenly on Jan. 21st. Mr. Dunnock had been associated with the firm for 56 years.

It only takes a pebble . . .



like the war-beginning
of Darex* Resin Adhesives with #737
to make an ever-widening ripple until today . . . our
resin adhesive principle has changed our
thinking and the industry as well.

Here's a new DAREXcellent one! #740

Properties: fast tack, low viscosity; applied by spray,
nozzle or roll. Stable and non-foaming. Resists high
temperatures, mold growth, water, vermin. Dark brown
color**.

Uses: for a quick-stick on paper to paper, cloth to
cloth, paper to cloth, including wax-treated paper.

Add
a few
new ripples
to your
production-profit and packaging-pleasure,
try

DAREX SYNTHETIC RESIN ADHESIVES

Adhesive and Coatings Division
DEWEY AND ALMY CHEMICAL COMPANY
CAMBRIDGE 40, MASSACHUSETTS

* T. M. REG. U. S. PAT. OFF.

** Similar properties can be obtained in adhesives with a semi-transparent dried film.

A PACKAGE THAT APPEALS AND SELLS!



**TRANSPARENT
Plastic
BOXES...CANS**

- Confections
- Candies
- Bakery Products
- Nuts

These and many other products are more readily "saleable" packed the modern Transparent Way

Appeal to the "Impulse" buyer as well as the "Shopper." Your product will get the decision twice as often.



WEINMAN BROTHERS, INC.

Est. 1919

325 N. WELLS ST.

CHICAGO 10

Fabrics... RICH IN COLORS... TEXTURE... APPEARANCE

Let your next packaging fabric come from MAHARAM! Then you're sure of materials that combine eye-catching appeal with matchless quality.

We have available numerous packaging materials of every possible type to suit your needs. Samples and prices sent on request.

For an expert solution to your packaging problem, whether it be the inside or the outside of your package, call on MAHARAM for:

SATINS • BENGALINES
VELVETS • LEATHERETTES
DUVETYNES • DUPLUSH
TAFFETAS • VELUR-TEX
RIBBONS • VELOUR PAPERS
FOIL PAPERS • RAYON
FLOCKED MATERIALS. • ETC.

"The House of Service"

MAHARAM
FABRIC CORPORATION

130 WEST 46th ST., NEW YORK 19, N.Y.

CHICAGO
6 East Lake St.

ST. LOUIS
927 Century Bldg.

LOS ANGELES
1113 So. Los Angeles St.



U.S. Patents Digest

Edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Closure, B. R. Billmeyer (to Armstrong Cork Co., Lancaster, Pa.). U. S. 2,431,303, Nov. 25. A liner material for a closure for sealing a container for strong acids such as concentrated sulfuric, hydrochloric and nitric acids which comprises a mixture of polyisobutylene and a material selected from the group consisting of vinyl chloride-acetate copolymer and polyvinyl chloride and inorganic fillers and a series of fibres to strengthen and reinforce the liner, all of which are resistant to acids.

Tray Unloader, P. E. Fischer (to Standard-Knapp Corp., Portland, Conn.). U. S. 2,431,320, Nov. 25. A rotary carrier having plurality of outwardly extending arms, lifting head carried by each arm and a conveyor to deliver trays filled with containers at a pick-up station adjacent to the paths of the lifting heads and also equipped with a receiver conveyor for containers.

Machine for Opening Collapsed Tubular Box Blanks, J. Bousquet (to Beech-Nut Packing Co., Canajoharie, N. Y.). U. S. 2,431,365, Nov. 25. In a box-billing machine, a hopper for receiving box blanks in flattened condition and arranged in a stack one upon the other, means for successively removing blanks in a downward direction from the bottom and so arranged whereby box-opening forces are successively applied at spaced points to edge of box.

Folding Holder for Papers, J. N. Fistell, New York, N. Y. U. S. 2,431,472, Nov. 25. A folding holder for a thin flexible sheet, holder comprising a back portion of foldable material, spaced transparent sheets that constitute jointly the front portion of holder and spaced apart at their edges and means securing each sheet flexibly at an outer edge only to an outer edge of the back portion so that sheets may be opened by flexing at their outer edge to expose a continuous sheet-receiving space defined between outer edges of all of sheets.

Razor Blade Magazine, A. Tuerff, South Orange, and L. C. Lotz, Newark, N. J. U. S. 2,431,523, Nov. 25. A dispensing magazine for razor blades of double-edged, slotted and notched-corner type comprising a casing formed by top, bottom, side, front and rear end walls, with endwise open-tray guide shell fixed beneath casing top wall, shell forming top wall, and equipped with a manipulatable longitudinally reciprocable blade ejector bolt above the guide-shell top wall.

Folding Box with Slotted Divider Members, H. G. Bergstrom, New Rochelle, N. Y. U. S. 2,431,535, Nov. 25. A box comprising a bottom and four side walls extending at right angles to the bottom, strips of pliable material being fixed by a longitudinal edge to the free longitudinal edge of each wall, strips being of greater width than walls.

Method and Apparatus for Making End Closures for Tubular Containers, B. Bogoslawsky, Jackson Heights, N. Y. U. S. 2,431,537, Nov. 25. The method of making an end closure for a tubular container which comprises forming the end portion of a tubular blank to form an end wall and a neck protruding outwardly therefrom with all end edges collected together in neck and applying pressure to neck to compress and compact same to form a button of substantial strength and rigidity.

Dispensing Slide Closure for Paperboard Containers, W. P. Fessenden (to National Folding Box Co., Inc., a corporation of Connecticut). U. S. 2,431,744, Dec. 2. A paperboard box blank comprising relatively foldable sections to provide a box body including bottom, front panel and back panel, each panel having lateral extensions on its side edges foldable upon one another to form side walls, each panel having at one end a group of integrally connected relatively foldable flaps, first group comprising a first top flap having dispensing aperture therethrough and end flap for connection to the opposite panel, second flap having second dispensing aperture located to register with first aperture and a slit to accommodate a closure for apertures.

Packing Device, A. L. Sherwood (to Sutherland Paper Co., Kalamazoo, Mich.). U. S. 2,431,775, Dec. 2. A packing device for containers including top and side walls and bottom closure comprising a base having upwardly projecting container-wall

PROXMELT* LAMINANTS MOISTUREPROOF

PYROXCOTE*
RESIN COATINGS
LACQUERS



● Applied from the molten state—moistureproof solventless Proxmelt is used on parchment bag stock, locker paper, loose wraps—they impart improved gloss, hardening, and moisture resistance when added to paraffin—give utmost moisture impedance as laminants for cellophane, glassine, paper, and tissue.

● Pyroxcote Lacquers, applied from solvent solution, yield both heat sealing and non heat sealing moisture proof labels, canister wraps, tubes, bags, and inter liners.

* Reg. U. S. Pat. Office.

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PYROXYLIN PRODUCTS, INC.

CHICAGO 32

PAOLI, PA.

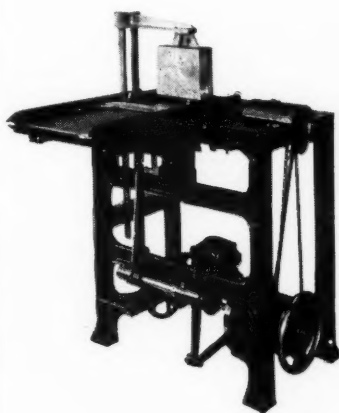
WICHITA, KAS.

PAYS FOR ITSELF

If your costs are going up on your package cartoning operations, it will pay you to investigate PETERS equipment.

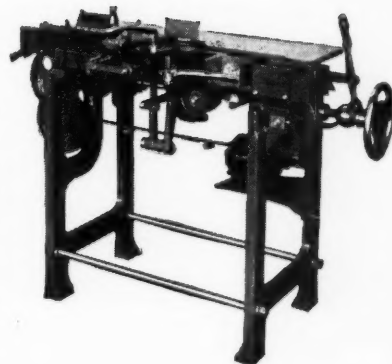
These easy to operate, economical machines will show you new sources of labor savings and cost cutting.

Yes, PETERS equipment will pay for itself.



This PETERS JUNIOR CARTON FORMING & LINING MACHINE sets up 35-40 cartons per minute, requiring only one operator. After the cartons are set up, they drop onto a conveyor where they are carried to be filled. Machine can be made adjustable to set up several carton sizes.

This PETERS JUNIOR CARTON FOLDING & CLOSING MACHINE closes 35-40 cartons per minute, requiring no operator. After cartons are filled, they enter machine on a conveyor and are automatically closed. Can also be made adjustable to close several carton sizes.



Send us samples of the cartons you are now using. We will gladly make recommendations to meet your requirements.

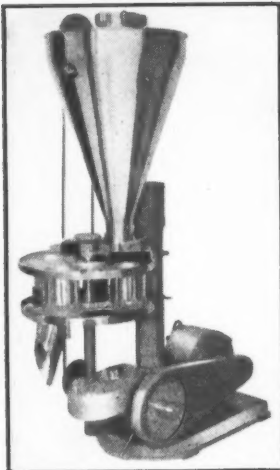
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GENERAL OFFICE AND FACTORY

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PACKAGE FILLING MACHINES



BENCH MODEL B-2

(Illustrated)

Fills from tiniest containers up to 2 lbs. with popcorn, frozen foods, powders, flakes, cereals, whole spices, etc. Accuracy within $\frac{1}{8}$ to $\frac{1}{16}$ ounce. Weight 115 lbs.

OTHER MODELS: B-1 fills containers up to 6 ounces; B-3 up to 5 lbs., B-4 up to 10 lbs.

ALL MODELS: Speed of 12 to 104 per minute. $\frac{1}{4}$ H. P. Motor.

IMPROVED MODELS • FAST • QUIET • ACCURATE • INEXPENSIVE

The new models retain the sturdy simplicity of previous models. Of particular importance is the totally enclosed driving mechanism, which operates in a bath of oil, eliminating wear and resulting in smoother and quieter operation. Cups are aligned with discharge spout automatically. It is practically impossible for machine to get out of order.

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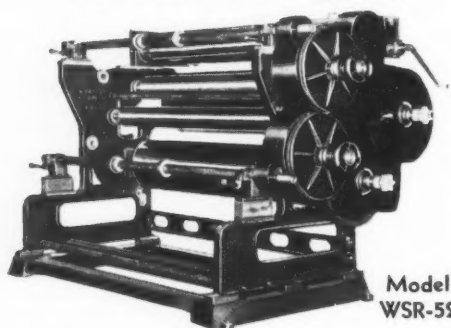
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P. O. BOX 231

U.S. Patents Digest

(Continued)

support members associated to support adjacent walls of a container inverted upon the base and a container-wall support and clamping member swingably mounted upon the base diagonally oppositely of aforesaid wall supports to be swung diagonally inwardly into supporting and retaining engagement with adjacent walls of a container to support walls of container in inverted position for filling from bottom thereof and to facilitate closing and reversing of container.

Collapsible Container and Method of Making the Same, F. La Grua, Stonington, Conn. U. S. 2,431,697, Dec. 2. The method of forming containers which consists in providing a flat collapsed tubular container wall of foldable board having attached to at least one end a flat reinforcing edging extending beyond edge of wall; expanding collapsed wall to form a hollow structure, inturning edging to form an inwardly extending stiffening ledge fixing shape of container and inserting an end-wall disk into hollow structure so as to rest on ledge. This blank when folded along score lines forms tubular container.

Bottle Carrier, R. G. Stigler (to Standard Molding Corp., Dayton, Ohio). U. S. 2,431,713, Dec. 2. A bottle carrier for selectively receiving bottles, base having side wall defining a recess adapted to receive and closely confine bottom of bottle and means for allowing bottle only to be inserted lengthwise.

Dispensing Container, M. I. Williamson (to National Folding Box Co., Inc., a corporation of Connecticut). U. S. 2,431,786, Dec. 2. A box carton comprising multi-sided tubular body formed of side walls and foldable flaps for closing its ends, one side wall consisting of inner panel and outer panel, inner panel having a securing tab hinged thereon secured to inner surface; outer panel also equipped with securing tab hinged thereto, each panel having dispensing aperture therein.

Oil-Can Handle and Screw Top, A. A. Miller, Wellsburg, W. Va. U. S. 2,431,881, Dec. 2. A handle portion for force-feed oilers including handle having enlargement at one end with edge flange depending from enlargement; juncture of handle and enlargement providing divergent portions formed with a continuation of edge flange of enlargement and threaded cap having lateral flange to fit snugly within flange of enlargement and lip to fit between flanges of divergent portions.

Fibreboard Bottle Carrier Having Partition Members, M. G. Hall (to Empire Box Corp., Garfield, N. J.). U. S. 2,431,932, Dec. 2. A bottle carrier formed from paperboard or like material and including when erected side, end and bottom walls and longitudinal transverse partitions, partitions being connected with bottom and end walls; partitions are maintained in proper positions and divide carrier into separate compartments.

Automatic Machine for Washing Containers, F. J. Cozzoli, Plainfield, N. J. U. S. 2,431,988, Dec. 2. In an ampule-washing machine an indexible element, a series of ampule-supporting and washing needles mounted on said element, means for indexing said washing needles successively from an ampule-feeding station and valve means and conduits for supplying cleansing fluid to ampules while at washing station.

Paperboard Carton and Liner, L. F. Thiry (to General Tire & Rubber Co., Akron, Ohio). U. S. 2,432,052, Dec. 2. A paperboard container having an impermeable oversized liner forming a bag, corners of said bag being free of attachment to container, liner having expansible lateral seam sections and flat-top seam folded onto and over top of bag and container closure comprising a truss section folded over into gripping engagement with tops of inner sides of container walls and equipped with locking tabs.

Continuous Method of Forming Flat-Folded Lined Cartons, H. F. Waters, New York, N. Y. U. S. 2,432,053, Dec. 2. The method of forming flat-folded paperboard packages having envelope liners formed integrally therewith and erectible into squared-up use position, comprising die-cutting and advancing web of paperboard; adhering a superposed sheet of thermoplastic onto and over advancing web, thereby conforming thermoplastic lining to web sections, means for heat sealing thermoplastic sheet to paperboard and severing means.

Method of Continuously Forming Fluid-Tight Packages, H. F. Waters, New York, N. Y. U. S. 2,432,054, Dec. 2. The method of continuously producing fluid-tight package blanks having inner surfaces characterized by great resistance to puncturing, which comprises forming a flexible web fluid-tight and fusible on one face; securing a plurality of spaced flexible cushioning members transversely over the web; folding advancing

It Will Pay You To Be a Whiz at This Quiz



Quiz yourself for fun and profit on these package ink questions: 1. Where can I get a compact guide to printing inks for packaging? 2. Before my package goes to press, what can I do to get a better printed result? 3. How can I get uniform printed colors on packages of different stocks? You'll find the answers to these questions in column 4 below, and additional information on these same subjects in items on this page.



1437 Little Words—All on Inks for Packaging

Small enough to fit in your vest pocket if you want it there—that's how compact and convenient you'll find the IPI Guide to Printing Inks for Packaging. It contains 1437 words on the selection of printing inks for packaging. There is concise, helpful information on bag and label inks, fast drying inks, color control, printing processes, the selection of colors, and many other practical subjects. Copies, so long as they last, are free. Write for one today.

INTERNATIONAL PRINTING INK • EMPIRE STATE BUILDING, NEW YORK 1, N. Y. • FEBRUARY 1948

WE DON'T ENCOURAGE COUNTERFEITING, BUT...

Irvin S. Cobb once said he did not condone athletic competition involving physical violence, but if he had to go to a wrestling match he wanted to sit in the front row where he could hear the bones crunch.

We don't encourage law breaking and we don't sell to counterfeiters if we know it. However, even counterfeiters seem to recognize the qualities of IPI inks. When the Secret Service caught up with a counterfeiting gang in Chicago last month, they found, among other things, a supply of IPI ink (see photo).

The ink was sold to a jobber

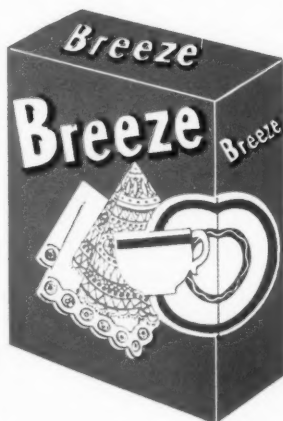


Chicago Daily News photo, courtesy John Harin

Even counterfeiters use IPI inks. Otto Kerner (left), U. S. Attorney and Harry D. Anheier, Secret Service Chief, examine counterfeit printing plates and fake money, after rounding up the nation's largest counterfeiting ring. A supply of IPI inks bought through a jobber was also found. Somebody did a darn good job of color matching—but don't ask for samples!

who has an excellent reputation of 25 years standing. He had no knowledge of how his customer was going to use the ink, and was freed of all blame by the Secret Service.

THEY MATCHED THESE COLORS LIKE A BREEZE



The new Breeze carton of Lever Brothers really is under color control. Careful, comprehensive spectrophotometric color data was secured on all preliminary proofs of the Breeze carton on all of the stocks to be used on the job. Thus, recorded measurements with proper tolerances were established before the carton was given executive approval.

The Purchasing Department of Lever Brothers Company, manufacturer of Breeze, says it broke all records in obtaining management approval of the new Breeze color appearance—5 minutes flat.

WHAT TO DO BEFORE YOUR PACKAGE GOES TO PRESS

Simply by calling in your printer early, you can do a lot to insure your getting the best possible printing job on your package.



Your printer can tell you how your ideas will print, and how practical they will be to handle in the shop. A suggestion from him may save you a good deal of money.

When you call your printer early, you give him an opportunity to consult with his ink and paper suppliers. As a result, you learn, before your plans are far advanced, whether the colors you have in mind for your package can be matched in printing inks with sufficient resistance to deteriorants and handling.

Sometimes a minor change, which an ink formulator may be able to suggest, can greatly improve the ability of your package or wrapper to "stand up" as well as stand out.

WORKING ON A SURFACE THAT'S HARD-TO-PRINT?

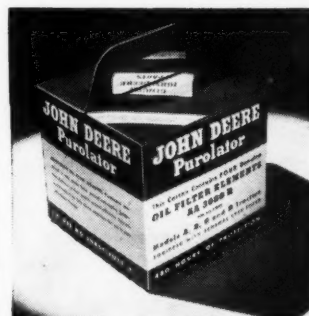
Difficult surfaces—those new plastics for instance—are a pain in the neck to package printers—and to ink makers. Also in this classification of surfaces are glass, metal foils, plasticized cellophane, acetate, and glassine.

IPI is continually developing new and improved formulations for almost every type of surface, including all those listed above. Moral: "Keep in touch with IPI."

INGENIOUS PUROLATOR CARTON USES I.P.I. INKS

It looks simple and it's beautiful to look at—this Purolator carton. The design had to be ingenious in order to ship the cartons flat.

The IPI gloss inks which Alford Cartons, Inc., Ridgefield Park, N. J. used to print the cartons worked beautifully on the Miehle two-color press. If you would like more information on how this carton was printed, ask us for it.



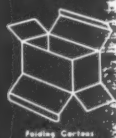
Clever people these package designers. This Purolator carton is an example. Smart, too—they used IPI gloss inks to produce a striking result.

ANSWERS TO QUIZ: 1. Write IPI. Guide is free. 2. Consult your printer early. 3. Set up standards and tolerances for color control. Address inquiries to IPI, Dept. MF.

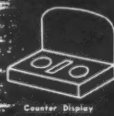
ARE YOU FACE-TO-FACE WITH AN ODOR PROBLEM?



What an odor problem this little fellow could give you if you tried to "package" him...even in a cage! We're happy our odor problems are confined to printing inks...like developing odor-free Vaposet® inks for food wrappers and packages. Too, Vaposet ink sets instantly upon application of moisture, permits immediate waxing or roll rewind. Write for more information.



Folding Cartons



Counter Display



Die Cut Sheet, Flat or Stitched



Setup Box Blank



Folding Display



Baskets and Carriers

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The bag has extreme resistance to chemical attack, exceptionally low MVT, high tensile and wet strength. Mass-produced by extrusion in seamless tubes which heat-seal to complete air-tight closure, it's available in any length, in flat widths from 1/2" to 25", in thicknesses from .0005" to .015".

To evaluate this new development in terms of your specific needs, write for samples and detailed information.

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U.S. Patents Digest

(Continued)

web along its central longitudinal fold line; heat sealing only the folded web transversely between severed cushioning members and then separating the so-formed flat-folded bag sections from the continuous web.

Roll of Sheet Material with Cohesive Coating, H. Y. Jennings (to Copeman Laboratories Co., Flint, Mich.). U. S. 2,432,075, Dec. 2. An article comprising a rolled strip of imperforate sheet material, only one of its surfaces being coated with and has bonded firmly thereto a temporarily cohesive latex membrane from which all water has been removed, said membrane being formed by an aqueous dispersion of rubber to the imperforate sheet material, thus making the sheet substantially non-tacky but still capable of cohering to itself to form a homogeneous membrane of double thickness, said membrane being distortable and stretchable even though the imperforate backing material is ruptured, said sheet-strip material being rolled tightly to maintain temporary cohesiveness and not adhere to back of sheet.

Method of Folding and Sealing Sheet Material, E. A. Pardee (to Shellmar Products Corp., Mt. Vernon, Ohio). U. S. 2,432,122, Dec. 9. The method of fabricating sheet material into an article which comprises providing a web of this material with triangular projections along one edge, folding web upon itself and sealing free ends marginally to form tubular body.

Receptacle for Fluids, G. C. Allen, Detroit, Mich. U. S. 2,432,132, Dec. 9. In combination, a container for fluids, cap therefor having an aperture therein, hollow tubular straw member extending through aperture coiled about container and having a frangible sealing member covering outer extremity of tubular members and cap, and a rip cord under the frangible member.

Jar or Bottle Closure, A. J. Hadert, Fort Wayne, Ind. U. S. 2,432,236, Dec. 9. In a closure for a bottle with neck a laterally removable saddle shaped to fit upon neck of bottle, a ball constituting a closure for mouth of bottle, rotation of ball being operated by a pair of springs.

Bottle or Jar Closure, A. J. Hadert, Fort Wayne, Ind. U. S. 2,432,237, Dec. 9. A closure for a bottle with vertical neck, closure comprising a saddle of resilient material of C shape in horizontal profile and of slightly more than 180 deg. arc, saddle being dimensioned to snap about the neck when thrust laterally thereagainst and a spherical ball of resilient material sized to fit in bottle to seal bottle mouth, which ball is operated by springs.

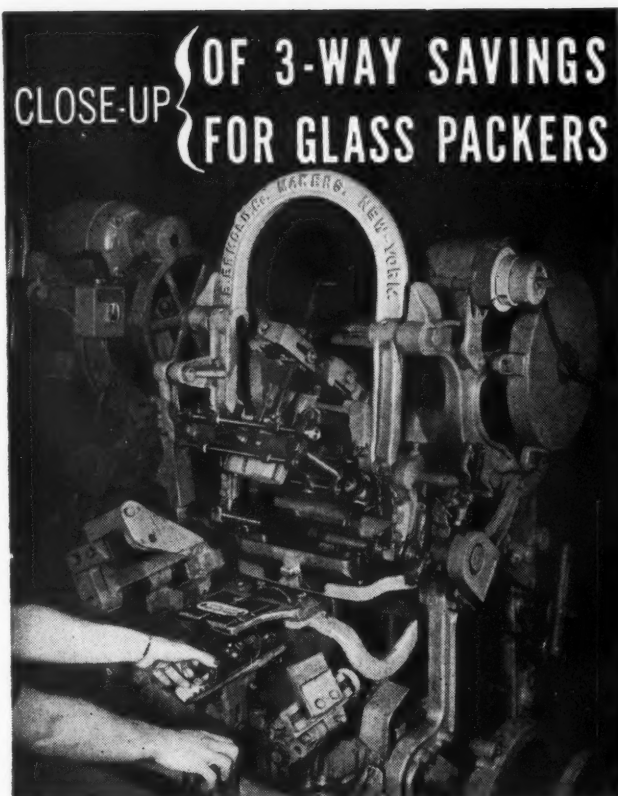
Bottle Carrier, J. A. Strobl (to Reynolds Metals Co., Richmond, Va.). U. S. 2,432,351, Dec. 9. A bottle carrier comprising handle frame having top handle portion, vertical-spaced side members and horizontal base, opposed clamping-shelf members each consisting of a vertical section and an angularly bent lowermost shelf section projected toward base of handle with upper and lower pair of links at each side of handle pivoted thereto and to clamping shelf members.

System for Filling Containers, E. W. Bleam and J. Y. Albertson (to Stokes & Smith Co., Philadelphia, Pa.). U. S. 2,432,373, Dec. 9. The method which comprises making containers in succession from a continuous web of sheet material before separation of a container therefrom, simultaneously producing a partial vacuum within container and externally thereof, during production of partial vacuum filling the container and thereafter sealing said container.

Dispensing Tube, H. F. Waters, New York, N. Y. U. S. 2,432,462, Dec. 9. A fluid-tight collapsible paper tube having heat-sealable inner surface and formed of folded-over thermoplastic-faced sheet folded on a central fold line to form an envelope having mating marginal edges and having thermoplastic surfaces face to face and sealed along mating marginal edges, dispensing aperture in central fold line and nozzle secured in aperture.

Bottle Carrying Carton, J. L. Lyons, Jr. (to Empire Box Corp., Garfield, N. J.). U. S. 2,432,481, Dec. 9. A collapsible bottle carrier formed from a blank of paperboard cut and scored to provide, in the carrier when erected to bottle-receiving condition, bottom wall, side walls, handle portion and bottle-receiving sections disposed between side wall and handle portion.

Foldable Blank Cellular Spacer Plug for Receptacles, A. P. D. Belanger, Alton, Ill. U. S. 2,432,501, Dec. 16. A spacer plug device of hexagonal shape made from a single piece of strong stiff sheet material folded into shape of cup, comprising transverse panel and a plurality of triangular brace members spaced about transverse panel and extending into close proximity



...on the **ERMOLD** Semi-Automatic Labeler!

Saves Time—Changeover from one size jar or bottle to another is quick and easy. In a matter of minutes, it's ready to go—on another product in your line.

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FEBRUARY 1948

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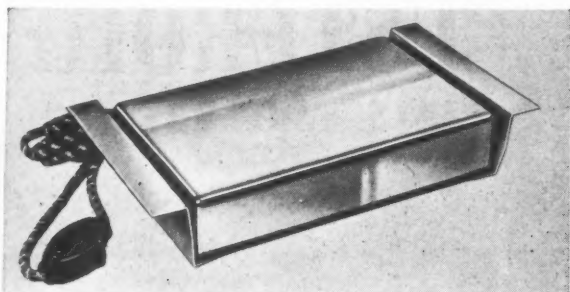
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- Installation is easy. Plate drop-fits into table. No screws needed.
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- Chromalox heating elements assure uniform plate temperatures.
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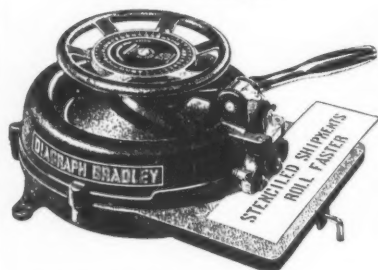
Also available with legs 6 x 10 SIZE 9 x 12 SIZE
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U.S. Patents Digest (Continued)

to each other and serving by connection with the panel to brace said panel strongly and effectively and substantially completely across the panel against collapse axially.

Fire Extinguishing Closure for Containers, S. F. O'Connor (to Western Electric Co., Inc., New York, N. Y.). U. S. 2,432,628, Dec. 16. The combination of a container having an opening, one side readily accessible to an operator and a safety cover therefor comprising cover member, pair of links pivotally connected to opposite ends of cover at forward points adjacent cover edge closest to one side when cover is closed, second pair of links pivotally connected to opposite ends of cover at intermediate points to rear of forward pivot points and equipped with a fusible link associated with trip latch and operable to release trip latch at a predetermined temperature.

Flexible Article Cover, C. E. Gardner (to Gardner Industrial Associates, Inc., New York, N. Y.). U. S. 2,432,662, Dec. 16. An article cover comprising a body of flexible sheet material having a head section provided with a reversely turned part affording a stretchable neck portion, head section being made of thermoplastic film material, neck portion consisting of channel-shaped strip also made of thermoplastic film material integrally thermosealed circumferentially on its opposite sides to rim of head section and a rubber band enclosed in neck portion at base of channel, neck portion forming a contractible and distensible opening for cover and thermosealed strip forming also a sealed-in binding trim for cover opening.

Bottle Carrier, E. H. Ulbrich, Dubuque, Iowa. U. S. 2,432,700, Dec. 16. In a carrier for bottles, a holding frame having two laterally extending side bars each with outwardly opening notches for receiving necks of bottles individually therein.

Container Side-Seam-Sealing Compound Applying Apparatus, G. L. Andron (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,432,707, Dec. 16. In a body maker wherein is provided a feedway and means for feeding body blanks along the feedway, each with a lateral edge thereof disposed in the direction of feed and equipped with a seam hood and a lap portion endwise of each end of the hook, a sealing-compound-applying means including a nozzle so disposed with relation to feedway as to be operable to apply sealing compound in said hook and on said lap portions of each blank as the blank is fed past the nozzle and means for supplying sealing compound to the nozzle.

Method of Salvaging Deep-Drawn Containers, H. A. Fink (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,432,740, Dec. 16. The method of salvaging a deep-drawn cylindrical container of definite height including bottom side walls and closure by means of reshaping, equally dividing excess length in reshaped body and turning half thereof into a flange at each end of body and double seam securing an end closure on each end.

Container, S. B. Jenkins, Boston, Mass. U. S. 2,432,764, Dec. 16. An improved dispenser container for tooth brushes and tooth powder comprising unitary casing separately housing said tooth brushes and tooth powder, removable closure located in upper end of powder portion of casing, outlet port located in closure and upper swivel cover pivoted to closure and having outlet port, and means for ventilating tooth-brush portion.

Container Fill Packing Apparatus, M. M. Sedwick (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,432,823, Dec. 16. In a machine of this type means for feeding filled containers along a straight-line feedway, pair of endless chains movable over feedway in parallel laterally spaced vertical planes, packer elements supported on crossheads and means guiding chains to cause packers individually and successively to move down into containers traveling along feedway.

Sliding Closure for Receptacles, E. R. Witherspoon, Englewood, N. J. U. S. 2,432,846, Dec. 16. A container comprising a casing forming an interior chamber of predetermined depth, fastener-supporting member having upper flat surface approximately at upper level of casing, metallic tongue-fastening element attached at one end only flat against upper surface and extending from line of attachment in a direction to receive a second fastening element and flat lid for casing.

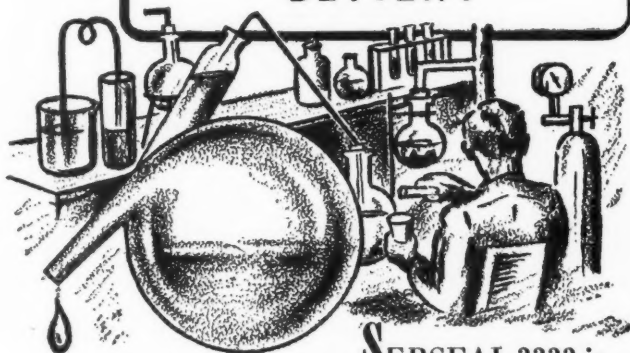
Multiwall Container, R. W. Lahey (to American Cyanamid Co., New York, N. Y.). U. S. 2,432,968, Dec. 16. An inner multi-ply flexible bag carrying a flowable commodity, outer multi-ply flexible bag completely enclosing inner bag, latter having a spout of less width than either bag and projectible through one edge of outer bag when extended, folded over against itself and tucked between sides of outer and inner bags.

"Commerce"

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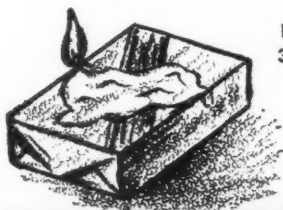
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IN 35 POUND PAPER BULKANS,
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CARLOADS OR LESS

Samples upon request

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It is a matter of record that the "GEYER" Filling Machines have "packed them in" by solving packaging problems for the food industry over a period of thirty-three years.

Custom built, compact Filling Machines that handle semi-liquids to semi-solids and designed from a cost and operating standpoint to be adaptable for large or small production quotas — there is your assurance of a Filler that has earned an enviable record for performance in packaging.

Fillers are straight line with multiple cylinders . . . Designed for **CLEAN CUT OFF FILLING** for products that seek their own level . . . **BOTTOM UP FILLING** for semi-solids . . . No drip . . . Clean Filling . . . Entirely automatic . . . readily adjustable to any size or shape container . . . Maximum production output.

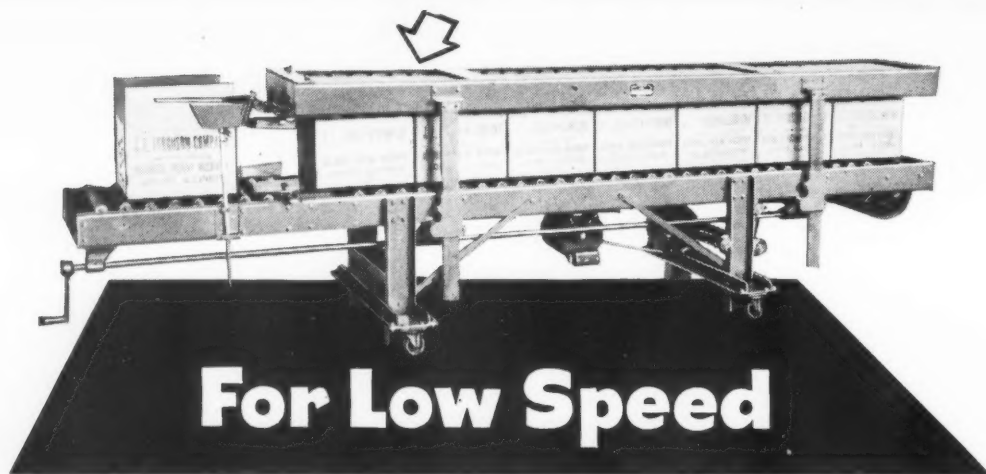
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Use Geyer Filling Machines

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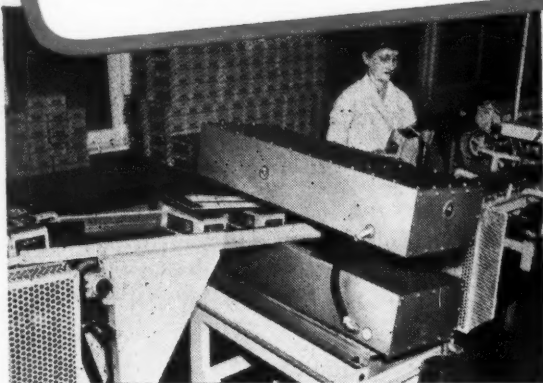
Adaptable to practically any production requirement or plant layout, built for varying operating speeds, and highly flexible in the application of adhesive, PACKOMATIC's *automatic* Model D shipping case sealer is an adhesive, time, labor and money saver.

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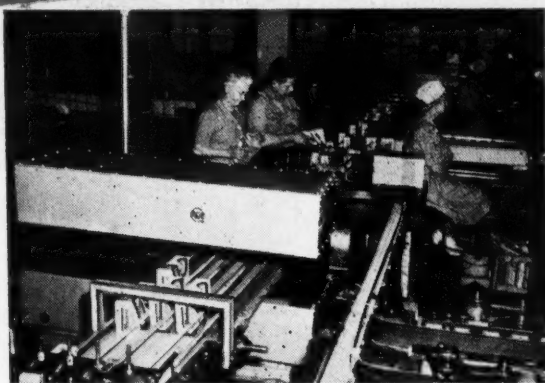
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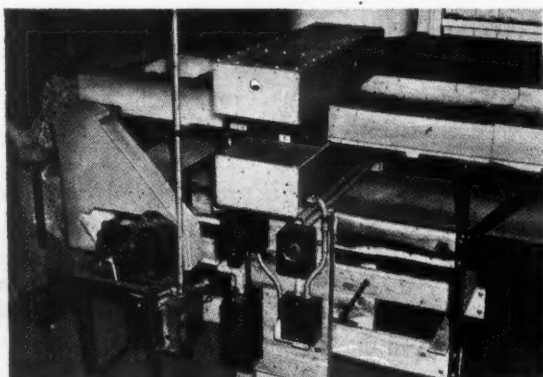
Stray Metal can't pass this electronic watchdog



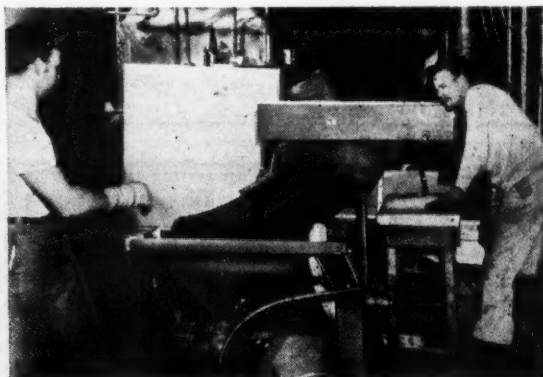
VICKS COUGH DROPS pass through this RCA metal detector after packaging . . . last of a series of controls on product purity.



THIS WHEATENA metal-detector installation is continuously on duty . . . safeguards quality of this popular breakfast food.



STEPHANO BROS., cigarette manufacturers, electronically inspect leaf tobacco . . . report that the metal detector paid for itself the first month.



KAYE-TEX MFG. CO., plastics manufacturers, use the metal detector to inspect plastic sheets . . . protect calender rolls. Speed: 115 feet per minute.

RCA's Automatic Metal Detector provides final check on product purity

TYPICAL of the precautions taken by industry to assure 100 per cent protection to its customers are these installations of RCA's metal detector.

Such equipment helps eliminate the last element of chance from product inspection — is assurance against the possibility, however rare, that a bit of stray metal might accidentally get into your product.

These metal detectors are placed in the

regular production line . . . can spot particles as small as 70 thousandths of an inch in diameter at conveyor speeds up to 600 feet per minute.

The material passes through the metal detector's aperture. *Any* metal or alloy . . . magnetic or nonmagnetic . . . even if deeply embedded, causes the detector to act instantly.

The action can stop the conveyor . . .

sound an alarm . . . reject contaminated packages or bulk goods automatically . . . or mark the material for later removal.

This RCA development provides a final check on conventional visual and mechanical inspection methods. It safeguards product quality . . . preserves customer good will. And . . . if your product passes through valuable processing machinery, you prevent costly repair bills.

Full information on the RCA electronic metal detector is now available. Write Department 96-B.



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RADIO CORPORATION of AMERICA
ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.

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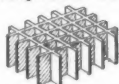


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Manufacturers of
Paper Board
Partitions

Change-over

(Continued from page 98) discontinued lines find their way to organizations that purchase them for premium distribution.

5. *Institutional sales*—Some old packages, particularly in the food field, if the product is fresh but merely in the old package, may be sold for institutional use, where there is no need for the package to do a counter selling job.

6. *Animal food*—Packages of foods which are too battered or stale to be used for human consumption are sometimes emptied and contents sold or donated in bulk to kennels, zoos, etc., although this is a rare practice.

7. *Salvage*—When the final run of an old package is completed, there are usually a few thousand labels over the last run of bottles, a few extra caps or a few old cartons. This is considered an irreducible minimum and most firms find it practical just to scrap such labels, jars or other obsolete material and write it off.

Repackaging

Mass-produced packaged products such as soaps, household cleaners, breakfast foods, canned goods, drugs and everyday toiletries such as dentifrices are practically never repackaged. The cost of such an operation is prohibitive. Excess must be disposed of in some such manner as outlined above.

Repackaging is a somewhat ambiguous term. If that word is used to mean the physical act of removing a product from one type of container and putting it into another, repackaging is practiced only in the rarest instances, such as for expensive perfumes or certain stable liquids.

More often, repackaging means redressing an already packaged product with a new label, a new box or a new closure to obtain greater consumer appeal. Cosmetic firms have used such aids very adroitly in meeting the changing market conditions of the last year.

The falling off of Christmas buying in 1946 left the cosmetic industry facing 1947 with excessive inventories and the jitters. At the year end, however, the Toilet Goods Assn. estimated that 1947 sales about equalled 1946, although estimates based on excise-tax returns indicated a drop of 10% or more for 1947. No matter which is correct, both show a levelling off from the boom years and the necessity for working off inventories. This has been accomplished best by companies whose managements have the experience and know-how to convert existing stocks into quicker-selling assets. Redressing the package is often one way to do it.

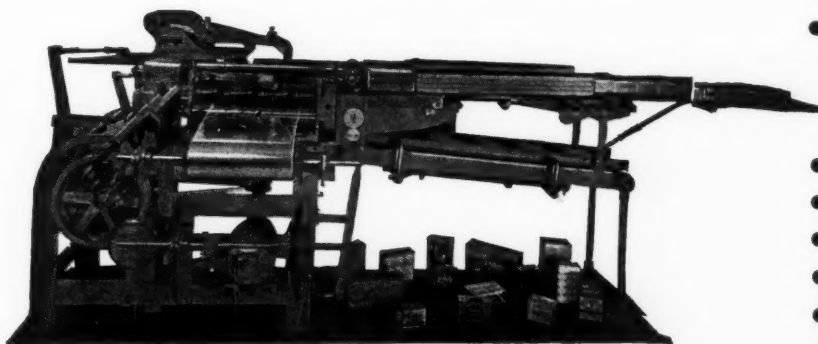
A most efficient example that might be classified under the current interpretation of "repackaging" is pointed out by Herman Brooks, who has put new life into the Alexandra de Markoff company since he purchased this firm a little over a year ago. The company was formerly selling a 3-oz. bottle of its Fragrant Fern cologne, without a carton, for a dollar. Mr. Brooks felt the product would sell better if it had a new look. But dressing it up would have meant adding to the cost

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FOR PEERLESS
OVERWRAPPING

An overwrap around your carton should provide protection and attractiveness. The HAYSSEN gives you both. Just enough heat is applied to the overwrap to provide strong seals without causing any detrimental effect on the contents. With the HAYSSEN Electric Eye you can use roll wrapping of heat sealing Cellophane, waxed paper, or heat sealing foil, and spot the design just where you want it. The operation of the HAYSSEN is automatic, and one operator can feed the cartons as well as take off the wrapped packages. There are many more HAYSSEN advantages—write for full details today.

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HAYSSEN WRAPPING
ELECTRONIC CONTROLLED MACHINES

making a good impression

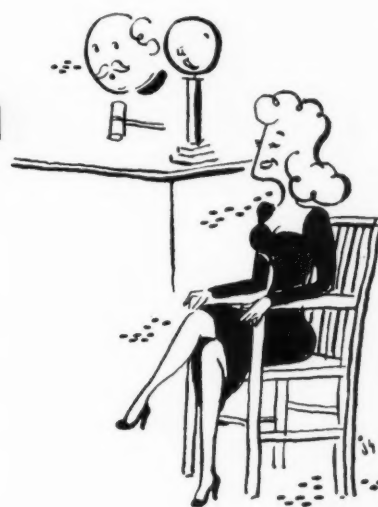
What are the properties of a good printing ink? smooth flow? uniform color value? stability under varying weather conditions? versatility? All of these and more. That is why discriminating printers of packaging containers, labels, food and box wraps choose Driscoll's Coverwell Inks. They know that the millionth impression, as well as the first, will make a good impression—will help sell more of the product contained within.

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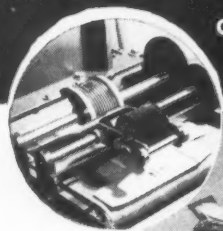
BRANCH: 407 E. MICHIGAN ST., MILWAUKEE, WIS.

Affiliated Concern: Great Western Printing Co., Portland, Ore.

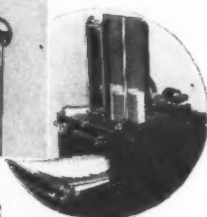


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COVERWELL INKS**
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CARTONCODA

IMPRINTS 4500 PIECES PER HOUR

Place a stack of flat cartons in the CARTONCODA... flip the switch... and WHI-R-R-R! — in minutes the stack is returned with clean imprints of code-date, flavor, color, etc. Operator controlling CARTONCODA also may feed marked cartons to packaging machine.

CARTONCODA saves time and labor wherever quantity coding or numbering is required. Makes up to 4500 small or large marks per hour on flat folding paste-end or tuck-end cartons, cards, tags, etc. Machine is adjustable to accommodate pieces of various sizes (from 1" x 3" to 12" x 22"). Has self-inking and interchangeable type features.

Write for complete details and specify exact nature of your imprinting problem.



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individualized labels, tags,
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CAMEO

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and he was advised by cosmetic buyers not to take the item out of the dollar class. He therefore brought forth a new 2-oz. bottle of Fragrant Fern with new plastic closure and housed it in a tube of transparent acetate. A comparison of the old package with the new one gives an idea of the added eye appeal of the new package. That it contained less cologne was apparently of no consequence to buyers or consumers who were interested principally in the more attractive package that could still be purchased for a dollar. The ounce of cologne saved offset the additional cost of the package, according to Mr. Brooks. The next problem was what to do with the inventory of the 3-oz. bottles of cologne. An atomizer top was designed and the 3-oz. quantity with atomizer is now successfully selling at a dollar and a half.

Such repackaging, however, should not be confused with a complete package redesign job. An upsetting factor of the beauty business is the constant danger of a competitor launching a revolutionary package with such superior consumer appeal that it will completely reverse another company's plans.

Cases in point were La Cross's new streamlined bottle and long-handled brush applicator for Naylor nail polish (MODERN PACKAGING, Dec., 1946, p. 120) and Revlon's new package for Lastron nail polish with an even longer-handled, quill-shaped applicator of transparent plastic (MODERN PACKAGING, July, 1947, p. 133).

These striking innovations usually start a trend of package change that competition is compelled to follow. Sometimes the change-over must be made very quickly. Old packages must be taken back to clear dealer stocks; new ones shipped.

In the nail-polish business, such changes can be disastrous unless closely figured provision is made for these emergencies in operating budgets. One large company claims there is no salvage value in returned nail-polish packages and says it destroys all returns. Its bottles and closures are private molds; therefore, it doesn't want them re-used through salvage sources. The product is volatile and has limited shelf life. In fact, this company code dates all of its product to assure freshness and normally calls back all old stock for replacement with new after a given length of time.

In effecting a recent package change, this company charged dealers a small handling fee to clear out all old stock. This method proved acceptable in most instances, the company said, because dealers welcome an occasional opportunity for complete clearance.

The recent change-over, however, was costly business, because it meant complete scrapping of all old stock. In trade quarters it is rumored that the company borrowed two million dollars to make the change-over and accomplished it successfully only because of the most meticulous cost engineering and its long-established record for top sellers.

Due to the keen competition in glamour packaging, cosmetic firms are often overstocked with packaging materials. The ingenuity with which these materials

Check-Weighing Fiberglas —the EXACT WEIGHT Way



Checkweighing Fiberglass at the Owens-Corning plant in Newark, Ohio

Owens-Corning Fiberglass goes through many operations before it is a finished product. First it's ingredient compounding to formulae and then step by step through the manufacturing process. Above (illustrated) is an EXACT WEIGHT Scale checkweighing a fiberglass blanket woven of strands 1/4000 inch in diameter for percentage loss of 1/100 gram after burning. Very light, this big roll weighs but 5 lbs. 4 ozs. This is but one more example of EXACT WEIGHT Scales at work in American Industry, proving that if it can be done by weighing EXACT WEIGHT can do it. Write for details covering your packaging problem.

EXACT WEIGHT Scale Model #273. End tower construction, compact (fits any packaging operation), short platter fall for speed, may be equipped with platter or scoop as desired. Dial 2 ozs. over and underweight by 1/2 oz. graduations—Capacity to 12 lbs.



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**WHIZ-
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your answer. Models are available to fill all types of containers from the tiniest up to 10 lbs., with accuracy from 1/32 to 1/8 oz. according to product. For candy, seeds, spices, noodles, nuts, coffee, flakes, grains and powders of all kinds, WHIZ-PACKER can produce up to 72 or more fillings per minute.

WHIZ-PACKER gives you: Quick product or package size change-over . . . Telescopic and interchangeable filling cups . . . Agitators for free flowing or sluggish products . . . Portability for general use throughout plant . . . Minimum power cost — drives by only a 1/4 HP motor . . . Many other advantages.

We are proud to include this fine machine in our extensive MILLER line of superior packaging equipment. Ask us now for detailed information about the original WHIZ-PACKER Filling Machine.

MACHINES FOR

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- ☐ Bag-Making
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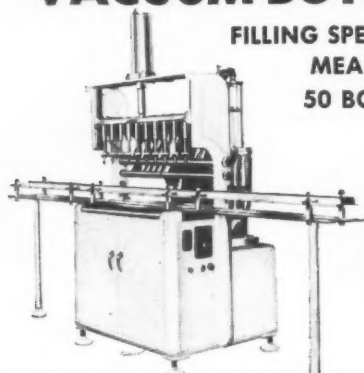


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187

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50 BOTTLES PER MINUTE**



The "Pneumo-Vac" is operated by a balanced foot valve which allows the operator full use of both hands and reduces physical effort to a minimum. Dripping is positively prevented while unit is in operation. Liquid filling heights, for 3" to 13" bottles, can be quickly regulated. Illustrated "Pneumo-Vac" bulletin gives full information. Write for your copy.

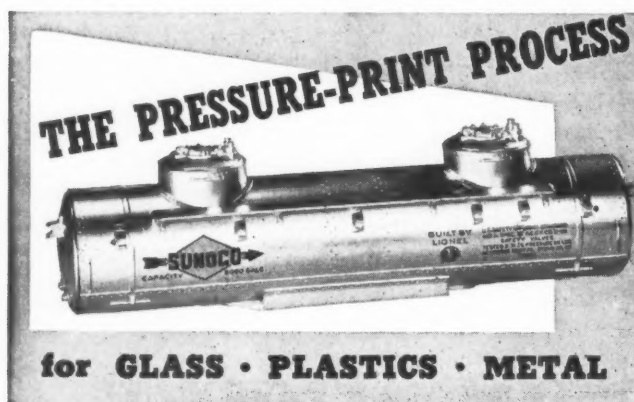
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PRESSURE-PRINT is a special printing method we have developed for reproducing any number of colors on any shape and size of container. Good for glass, plastic or metal.

We can install this process in your plant and teach your operators how to reproduce in perfect registration any number of colors.

Or—if you would like to see how PRESSURE-PRINT will look on your container, we can do the work for you in our plant.

PRESSURE-PRINT process is impervious to oil, alcohol and water. Doesn't rub off, stays brilliant. Investigate PRESSURE-PRINT today.

Multi Color Graph

CORP.

Delaware 3-4445 397 Halladay St., Jersey City 4, N. J.

are adapted to new packages for special promotions should be an inspiration to manufacturers in other lines. One company told what they did with a purchase of red-leatherette boxes which, on arrival, did not satisfy requirements for housing the bottle of expensive perfume they had planned them for. Instead of throwing them away, they used them on special gift sets. There are still some satin pads that were removed from the original boxes. "Don't throw them away," says the designer. "We'll find a use for them eventually."

Conclusion

Apparently, there is never a case in which the problem of getting rid of old packages is considered insurmountable if new packages are contemplated. Most firms say that they experience very little difficulty in this matter. If the ideal change-over objectives cannot be attained, then other measures are taken to accomplish the purpose—and that purpose is constant attention to package improvement to sell more goods.

Produce shippers' test

(Continued from page 133) day since we unloaded the car, I checked and used the celery and lettuce I have been holding for observation. This lettuce and celery was still 100% salable. It looks to me like Mr. Martin is on the right track and I hope his organization stays with it. If they come out with nothing more than a change in shipping containers, they have spent their time and money well."—*Columbus*.

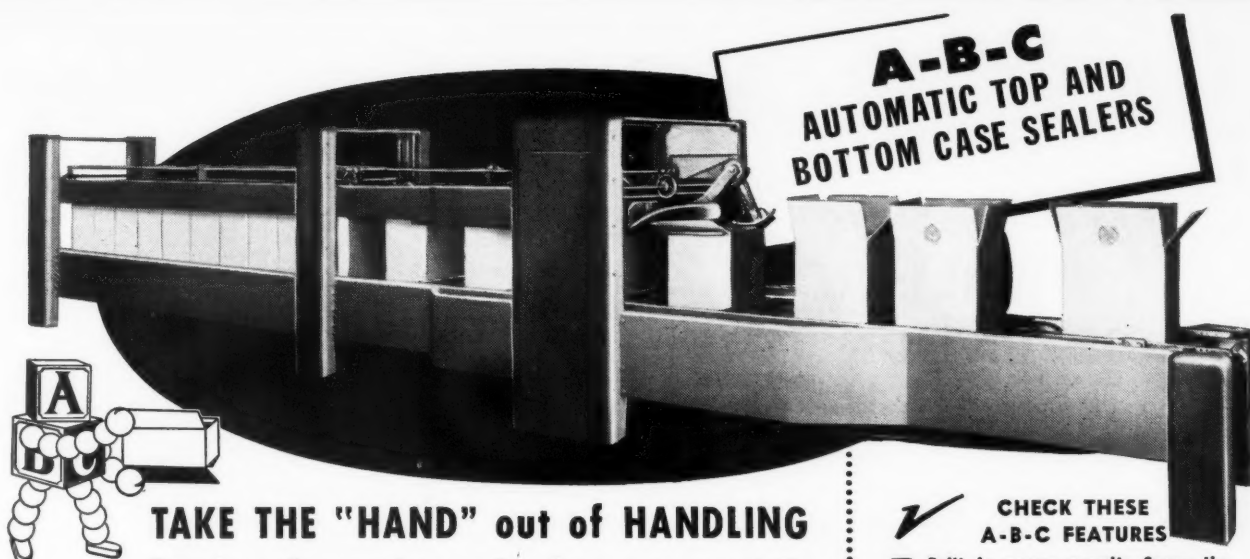
"Generally, as you will find from the consensus of opinion, the results are mostly favorable. From my personal inspection on arrival here, condition of the merchandise was generally good. We kept one package of each commodity in our store chest for 10 days and noted no change at that time. The preference is decidedly to packaged merchandise. With few improvements in package, I believe that possibilities are very good."—*Andrew D'Arrigo, Boston*.

"The merchandise was shipped to 23 selected stores (all with dry-produce racks) on Monday morning. The broccoli and cauliflower were shipped to all stores (100 or more) which had ordered these items. The lettuce had some tip burn and the butts were quite brown. Most of the stores trimmed the unpackaged lettuce slightly before putting it on display. This slight trim gave it a fresher appearance and it sold more readily than packaged lettuce."—*Kroger, Detroit*.

Recommendations

The recommendations of the participating observers as to further action may be summarized as follows:

1. Less than eight tons of the total of 66 tons of produce shipped in these experimental cars was pre-packaged. Solid cars of pre-packaged merchandise must be similarly shipped before final results can be ascertained.
2. More work needs to be done to determine the



TAKE THE "HAND" out of HANDLING

Expensive sealing operations are done faster, more economically with the streamlined A-B-C Top and Bottom Case Sealer. A recent installation in one plant saved \$4000 the first year. Cases are sealed directly from the production line at speeds up to 60 cases per minute. It's all automatic. No operators required. Top inner flaps are tucked as bottom outer flaps are opened without disturbing contents of case. Glue is applied both top and bottom and outer flaps folded in place simultaneously. Compression unit with individual spring rollers applies even pressure to complete the sealing job. Unit can seal top flaps only or bottom flaps only. A-B-C specializes in building packaging machinery exclusively. Let an A-B-C specialist help solve your packaging problems. Write A-B-C PACKAGING MACHINE CORP., Dept. M1, Quincy, Ill.

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QUINCY, ILLINOIS

✓ CHECK THESE A-B-C FEATURES

- Built in power permits finger tip control
- Simple, sturdy construction for minimum down time . . . low maintenance cost
- Adjustable to wide range of case sizes by pressing a button
- Glue applicator and compression unit supported at 4 points for even pressure
- All main drives ball bearing equipped—geared head motors

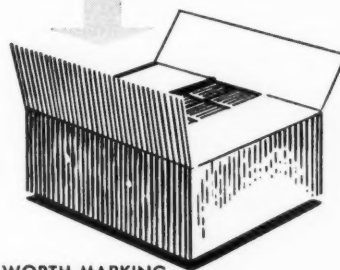
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Your product — on the inside of a shipping container — can be sold by your traveling billboard advertising — on the outside of that same container. An effective sales message economically imprinted on your shipping containers can pay large dividends.

Matthews is ready to help you design your message and to supply you with the printing dies necessary for attractive imprinting. The services of a large staff of talented artists is available to you. Printing dies by Matthews assure you of efficient, economical reproduction for your message. Write or call your nearest Matthews representative today for complete details.

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OPTI-CHEK

WILL CUT REGISTRATION TIME!

The simple fool-proof operation of the OPTI-CHEK will cut your registration time in half and eliminate idle presses . . . for color registering is done *off* the press and once your plates are in printing position the job is ready to run with no further adjustments necessary. Two OPTI-CHEK models are available—Model F for use with flat-bed presses and Model R for use with rotary presses.

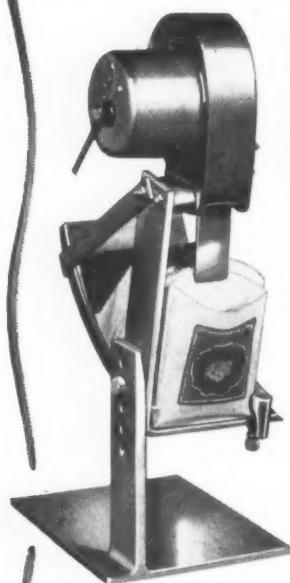
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Write for Bulletin 2-29



exact type of film and package structure that will best protect each produce item. The need for ventilation of some packages should be fully explored.

3. Methods of improving the *appearance* of packages should be studied. While consumer acceptance was generally good, it was obvious that the lettuce, carrots and Brussels sprouts need more attention as to appearance.

4. Work should be continued on wrapping and filling techniques to develop practical and economical methods of preparing packages with proper sales appeal.

5. The two types of crates tested appeared to be entirely successful and should be adopted whether produce is packaged or non-packaged.

Materials Handling show

Packaging men were well represented among the estimated 15,000 who attended the second annual Materials Handling Conference and Exposition in Cleveland last month.

The exposition showed a tremendous array of new and improved mechanical devices for the handling of packaged goods, with particular emphasis on palletizing. Among the machines that attracted attention was the new automatic pallet loader. There were also many new conveying devices to eliminate the last of the manual-handling steps in the production and shipping line. One of the most encouraging things to visitors was the fact that deliveries of equipment appear to be much improved over a year ago, normal 30-to-60-day deliveries being quoted in many instances.

In an address on "Planned Packaging for Efficient Handling," James G. Witte, manager of the Merchandise Preparation Division of Montgomery Ward & Co., pointed out the necessity of fitting the package carefully to today's mechanized handling systems in order to realize the maximum cost saving. Mr. Witte stated that in 1946 the total of packaged merchandise represented a wholesale value of \$50 billion, of which \$5 billion each were spent for packaging and for transportation. Recent surveys, he said, indicate that the additional cost of handling this merchandise in factories, warehouses, etc., accounted for another \$5 to \$10 billion, so that, all told, there is a factor of between 30 and 40% of the selling value of all packaged merchandise that can be affected by proper packaging and handling.

The keynote speaker, Ezra W. Clark, materials handling consultant, declared that better handling of materials by industry will "break the log jam of inflation." Other speakers pointed out that the unproductive task of moving materials from one stage of manufacturing to another costs 20 to 30% of the average factory payroll—and uses up 80% of the nation's unskilled labor.

All told, some 200 manufacturers of handling devices used more than 200,000 sq. ft. of space to show their products. It was agreed that next year's Conference and Exposition will be held in Philadelphia.

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strength and rigidity over square boxes . . . individuality of design
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Our other advantages include proven per-
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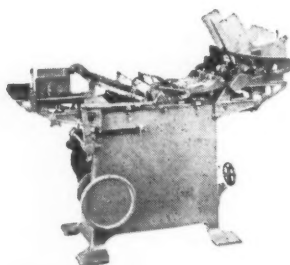
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Tin restrictions issued

The long-awaited tin-conservation order made its appearance on Jan. 30, in much milder form than had originally been expected. In general, it merely restricts can manufacturers to the use of no more tin in 1948 than was used by them in 1947. The announcement of the Department of Commerce order stated that it was designed to save 2,750 tons of tin for the nation's dwindling strategic stock-pile.

The order forbids entirely the use of tinplate cans for coffee, forcing that product into non-tinned metal, glass or paper. Motor oil is allowed no one-quart tinplate cans, although terneplate may be used. Animal foods are restricted to no more than 75% of the tinplate coating used in 1947 or 1941, whichever is larger, and are allowed no tinplate can ends. Pigmented oil paints may use no cans with a tin coating heavier than 0.25 lb. per base box, but terneplate may be substituted.

The use of cans for beer is in effect frozen at the 1947 level by a provision that beer may use no more tinplate than it used in 1947.

The order will become effective Feb. 29 only if Congress extends government controls on tin beyond that date, but this action is generally expected.

Aluminum foil

(Continued from page 147) 700 deg. F. Aluminum foil is also odorless, tasteless and does not absorb odors from the surrounding atmosphere.

Resistance of aluminum to corrosion

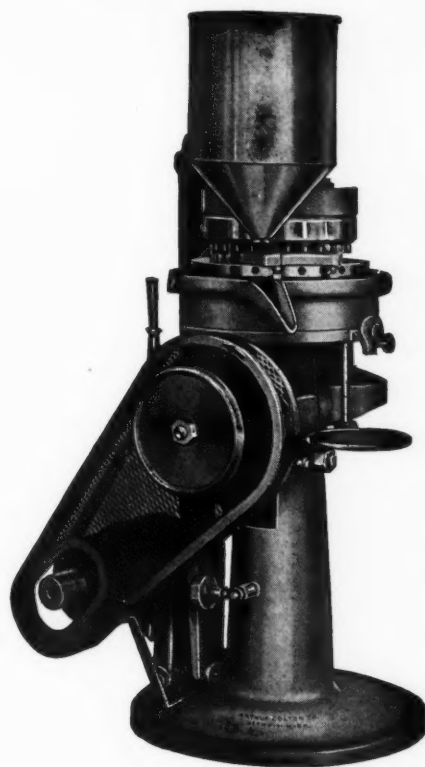
The resistance of aluminum to attack by various materials is an important consideration in some applications of aluminum foil and other aluminum products used for packaging. There are certain conditions met with in packaging which may have a significant effect and which sometimes make necessary a special appraisal of a new packaging problem. Such factors as temperature of storage of the package, probable time of storage, thickness of the foil, etc., must be given careful consideration. Aluminum foil is unaffected by sunlight, is noncombustible and, being nonsorptive, does not exhibit dimensional change with change in the humidity of the atmosphere. While intermittent contact with water generally has little action on aluminum, moist or hygroscopic products packed in thin foil may cause some reaction, particularly if the product contains salt, or salt and some organic acid, as in the case of cheese. The action may be quite severe and require a protective coating on the metal. Solutions of heavy metal salts, such as those of copper, nickel, tin, etc., have a corrosive action on aluminum. Soaps and detergents are generally sufficiently alkaline so that they attack the natural protective oxide film on aluminum and it becomes necessary to pack them in coated foil. Oils and greases, as a rule, have little or no action. How-

NEW ROTARY TABLET PRESS

New series 200-25 tablet machine embodies years of experience in building equipment, incorporates refinements giving an entirely new standard of performance.

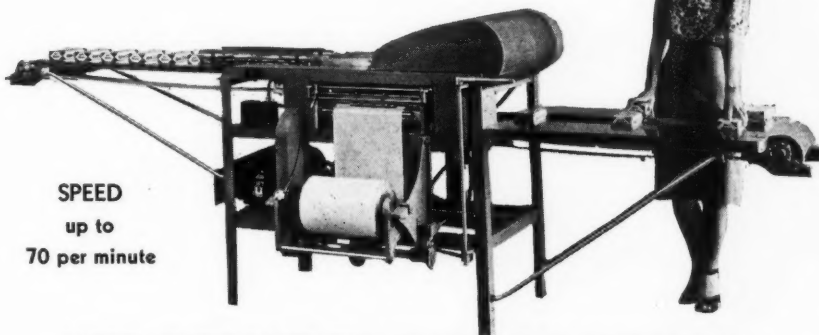
Special features include new variable lower punch pull-down track plus micrometer cell adjustment minimizing punch and die wear and practically eliminating capping; solid steel tie bar; centrally located main drive shaft; lower center of gravity. Range of operating speeds is provided by built-in variable speed drive. Power transmitted through lever operated disk clutch. Special drive materially reduces power consumption. Standard speed motor. Capacity per minute: 300-800 tablets. Diameter of tablet $3/16"$ to $5/8"$, maximum depth of cell: $11/16"$. Floor space: 30" X 36", height: 60", net weight: 1025 lbs.

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THE NEW WRAPPER THAT IS TAILOR MADE TO FIT YOUR PACKAGE

It is light in weight; yet sturdy in construction. Free of vibration. Positive chain package feed—positive thermostat heat control. Furnished with or without electric eye. Mounted on casters at added cost. Easy to move; its simplicity of design is gadget free. A machine built to do one job continuously with perfection.



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MODEL JS SIDE PAPER FEED STRAIGHT THRU PRODUCTION

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SPECIFICATIONS

Minimum $1\frac{1}{2}"$ high x $1\frac{1}{2}"$ wide x $1\frac{1}{2}"$ long. Equipped with $\frac{1}{2}$ H. P. Motor—110 or 120 volts. Send samples with request for additional information.

Maximum $4\frac{1}{2}"$ high x 6" wide x 12" long.

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DON'T JUST WRAP—"KNAPP WRAPP"
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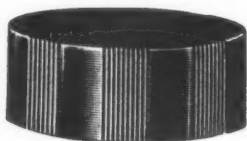
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ever, the only safe rule is to make a packaging test in the case of any new type of product.

Aluminum foil may be coated with lacquers and synthetic-resin coatings of various kinds. It is common practice, for example, to apply colored lacquers to foil for decorative purposes. These lacquers are usually made with a nitrocellulose base and are the quick-drying type, so that the foil may be coiled immediately after lacquering. Usually the lacquer is colored with a dye. These coatings, generally thin, offer little protection.

Where the foil must be heat sealing, a synthetic-resin coating of the thermoplastic type is employed. The resin should, of course, be selected to give adequate sealing within a permissible temperature range. For some purposes, foil is given a heat-sealing coating on one side and laminated on the other side to a thermoplastic sheeting. Foil can also be coated with thermoplastic synthetic-resin coatings which are not only heat sealing, but offer substantial protection against mildly corrosive products and environments.

By the use of quick-drying "metal" inks, foil can be printed on directly for the purpose of labeling and decoration. Printing can also be done over lacquer coatings or plastic films laminated to foil. The non-sorptive character of the foil requires the use of inks specially developed for this type of application.

The second article in this series next month will show how aluminum foil and foil laminates can be employed efficiently in bags, cartons and other type containers.

References

1. "Measuring Permeability to Carbon Dioxide and Water Vapor," J. D. Edwards and D. B. Strohm, *MODERN PACKAGING* 19 (Oct., 1945).
2. "Bibliography on the Hygienic Aspects of Aluminum and Aluminum Utensils," G. D. Beal, et al., Bulletin No. 3, Mellon Institute of Industrial Research, Pittsburgh, 1933.

Cosmetic foresight

(Continued from page 109) volved the adoption of the basic package design to price lists, letterheads, counter and window displays, so that starting in April, 1947, the new integrated program was ready to show to the trade. In introducing the line, HQZ replaced all existing inventory of old merchandise with an equal value for the new. "This was extremely well received by dealers," said Mr. Conwell, "still lacerated and bruised by the kicking around they got during the war."

"It was a Herculean job, but very soon the effect began to show on the ledgers. June, July, August, September and October figures surpassed corresponding months in 1945 and 1946 by from 10 to 45%," he stated. "Distribution is expanding, profits are growing. Definitely, HQZ has reversed its trend by taking drastic action when drastic action was needed."

CREDITS: Designer, Norman Steuer, San Francisco. Labels, Mercury Press, San Francisco. Closures, manufactured by Armstrong Cork Co., Lancaster, Ohio, and supplied by I. F. Schnier Co., Inc., San Francisco. Bottles, Owens-Illinois Glass Co., San Francisco. Displays, Velvetone Co., San Francisco.



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Polyethylene bag for lockers

A new type of frozen-food package developed for locker-plant use that may later have commercial application is comprised of a carton and a plastic inner bag of polyethylene film. These bags are claimed to have a foolproof seal, making possible an inner bag that will not leak and can be used again and again.



The new film is clear, strong and flexible, said not to crack, break or fracture even at 50 deg. below zero. It can be washed in hot water just as dishes are washed and used again the same as a glass jar. The material has a moisture-vapor transmission rate of only 0.6 gm. per 100 sq. in. on 0.002-gauge stock at 70 deg. F. and

35% humidity. Closure of the inner bag is made by twisting the open end tightly, looping it over into a "goose neck" and tightly banding the middle of the loop with a strong rubber band. Closures so made are said to be air tight. The film will heat seal by using a heavy piece of kraft paper on each side of the film where contact is made with heat—however, heat sealing is not required for normal freezing. The cartons are made of heavy, strong virgin kraft, tuck-end style.

The outstanding feature of the polyethylene film is that the bags won't leak, which eliminates the trouble locker users have had in the past with leaky packages of fruits, berries or other liquid contents.

The film is manufactured at high temperatures and the inside of the bag is never exposed to dust-laden air. Laboratory tests indicate it has the lowest bacteria count of any frozen-food container in the field.

CREDIT: Bag-in-carton developed cooperatively by Lindley Box & Paper Co., Food Packaging Division, Marion, Ind., and Shellmar Products Corp., Mt. Vernon, Ohio, using Shellmar's polyethylene film, Shellene.

Saran now generic term

The Dow Chemical Co. has formally released its trademark rights to the name "saran," permitting it to become the descriptive name of the product, according to Donald Gibb, head of the plastic sales division. Mr. Gibb said the action was taken "in the interest of simplifying identification on various plastic materials whose chemical names have for years been confusing to press, trade and consumer alike."

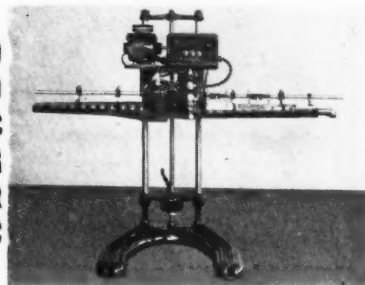
The term saran applies to a series of thermoplastic resins chemically known as vinylidene chloride copolymers originally developed by Dow in the latter thirties and known especially for their resistance to a wide range of chemicals. Monofilaments of the plastic are currently becoming prominent in the textile field. Moisture-repellent packaging films and corrosion-resistant piping are other important uses of the plastic.

FEBRUARY 1948

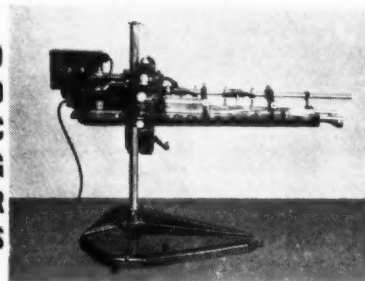
Amsco

ALL THE FEATURES YOU WANT
FOR BETTER BAG SEALING
3 MODELS (OF MANY)
TO FIT YOUR EXACT
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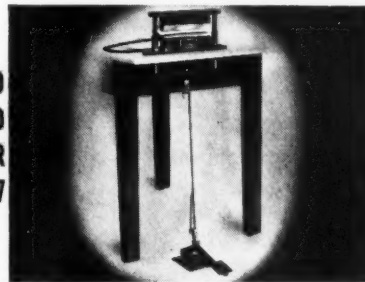
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HI-SPEED
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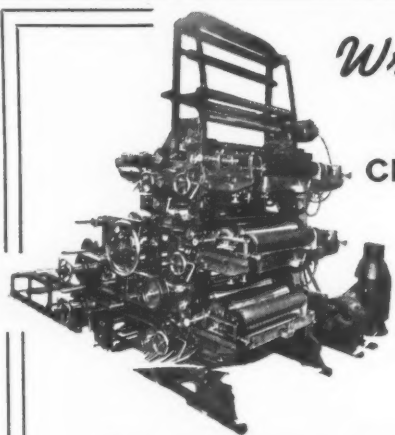
You find every packaging feature that "pays off" for you in increased production at lowest cost in AmSCO bag sealing machines. Maintain a fast, steady flow of sealed bags with no handling—bags automatically carried through folding, and sealing operations.

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Rolls of cellophane printed on this POTDEVIN can be converted into printed bags on POTDEVIN Cellophane Bag Machines or used as wrappers for products such as candy bars, bread, etc.

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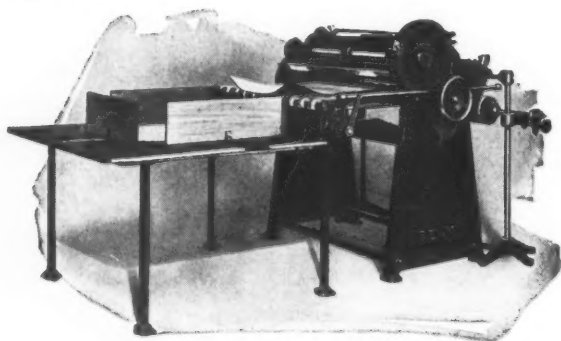
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FPBA pre-packaging report

Pre-packaged produce outsells bulk by a wide margin when packaged items are offered side by side with non-packaged items of identical quality, according to the results of a survey conducted in East Lansing, Mich., stores by the Folding Paper Box Assn. of America in cooperation with Michigan State College.

The test, directed by the Research Committee of FPBA, used only superior-quality produce and employed three types of packages for comparison pur-



Photo shows typical store display in East Lansing test, offering customers a choice of peaches in bulk and in window cartons. Regardless of the price differentials, the cartoned peaches far outsold those in bulk form.

poses: (1) a transparent bag made of 450-MSAT cellophane or cellulose acetate equivalent; (2) an over-wrapped tray and (3) a 24-pt. bleached manila carton with a window of 450 transparent cellophane in the top and extending over one end panel. The report shows that the folding carton outsold all other package forms when used for easily bruised items where protection is of greatest importance, such as peaches, grapes, etc.; but the transparent bag outsold all other package forms when used for items requiring little physical protection, such as beans and peas. No figures were given as to the sales appeal of the wrapped tray.

The report concludes generally that the transparent bag package improves the appearance of the produce greatly through maximum visibility and forms an excellent container for those items not likely to be damaged by handling; that folding cartons prevent bruising and stack well in refrigerated cases, thereby allowing a greater quantity of produce to be placed in the cabinets. It states also that the initial cost of the folding carton is "slightly higher" than that of the bag, but says that the speed with which the carton can be filled and the protection it affords are valuable offsets against this cost factor.

The survey brings out the fact that consumers apparently are willing to pay "substantially" more for pre-packaged produce. The conclusion reached was that pre-packaged produce "practically drives bulk produce off the market" when offered at equal prices and that it

Paper Package Pointers

FROM CYANAMID



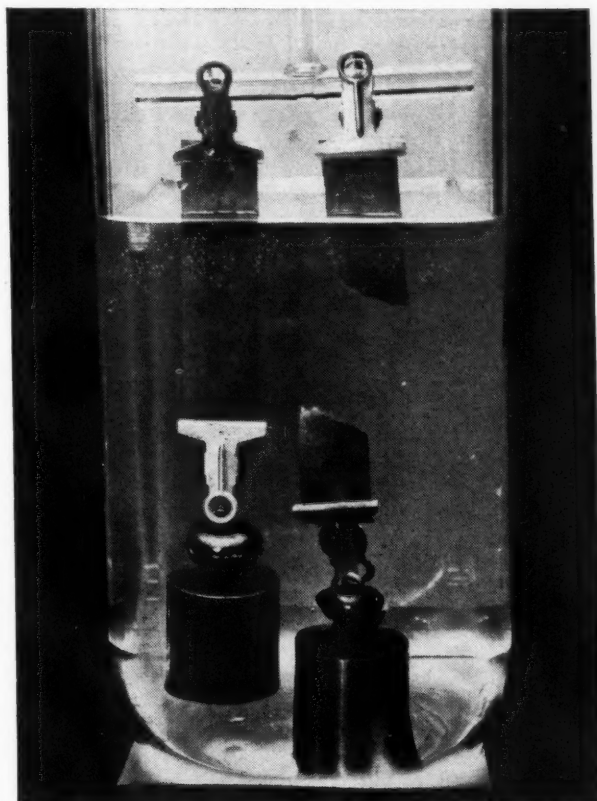
WET-STRENGTH PAPER A BOON TO PREPACKAGING

Efficient . . . Economical . . . it shows way to New Marketing Efficiency, Profits and Consumer Good Will!

In terms of combined economy and efficiency, wet-strength paper is already making a major contribution to new and better marketing of prepackaged goods. Enterprising food processors are turning increasingly to wet-strength paper to provide strong, durable containers for hundreds of varieties of fresh fruits and vegetables. Sturdy enough to retain strength under moist conditions and to withstand refrigeration, many different types of food containers made of wet-strength paper are now on the market. Indeed, so efficient and economical is this packaging medium that in addition to the attractive small paper bags with cellophane windows which now attract customers to hundreds of produce counters, large "master" bags are being used to ship produce to market in freight cars. Containing a number of smaller filled bags, these sturdy master bags answer the shipper's need for economical ease of handling of prepackaged goods.

The photograph, taken during actual wet-strength tensile tests in the Cyanamid research laboratories, graphically illustrates the remarkable wet strength imparted to paper by the specially developed melamine resin that bonds the fibers of papers in which it is used. Two weights were suspended from paper tape and immersed in water. The one at the right, suspended from ordinary paper, broke its tape almost immediately. The weight at the left, suspended from paper tape treated with PAREZ* Resin 607 has not yet torn from its tape—after weeks of suspension in water!

Because of the remarkable achievements realized in the development of wet-strength papers, many of the packaging functions which formerly required expensive metals, wood or plastics can now be performed with equal efficiency—and at far less expense—by paper. To the paper manufacturer, this offers almost limitless pos-



sibilities for expansion of his markets. For since paper can now be produced with an over-all wet strength of as much as sixty per cent of the original dry strength through application of PAREZ Resin 607, such varied items as ice cubes, coal, charcoal, greenhouse plants, beverage bottles and numerous other commodities which are packaged, shipped or stored under conditions of rain or high humidity can be efficiently and economically contained in wet-strength paper. In addition, numerous varieties of fresh fruits and vegetables now retain their freshness for days at a time in this improved paper.

*Trade-mark of American Cyanamid Company covering its synthetic resins for use by the paper industry. The processes under which PAREZ is applied in the production of wet-strength paper are covered by U. S. Patents Nos. 2,291,079, 2,291,080 and 2,345,543 and U. S. Patent Application Serial No. 453,032.



American
Cyanamid Company
Industrial Chemicals Division

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

DID CANADA CHECK OFF your PACKAGED GOODS?

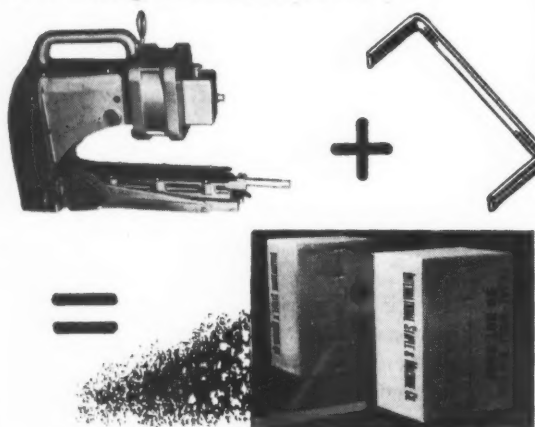


- Liquids
- Powders
- Pastes
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Are recent Canadian import restrictions affecting the sales position of your packaged goods in the active and growing Canadian market. Let our Packaging Division manufacture, package and ship your products in Canada to your specifications. We have the experience, capacity and equipment to manufacture, process your concentrates, or merely to package your bulk material. Your inquiries are invited.

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It's Simple Arithmetic . . .



. . . to figure out how much you can save in packing costs with an INTERNATIONAL RETRACTABLE ANVIL STAPLE MACHINE!

- Closes filled cartons from the outside.
- Pneumatic portable machine (illustrated above) can also be worked into conveyer assembly. (Manually operated portable machines and electrically or pneumatically operated stationary machines also available).
- Tremendous savings in time and materials (up to 50% in packing costs).
- Exceeds requirements of Consolidated Freight Classification.

**INTERNATIONAL
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continues to outsell bulk even when offered at much higher prices.

A reported example shows that fresh peaches in boxes outsold bulk peaches of the same quality 12 to one when offered at the same price. When the price of the boxed peaches was raised 3 cents, the ratio fell to three to one, but it continued to remain in front, five to three, when the price was upped more than 50%.

Green beans in boxes outsold bulk beans five to one at equal prices and two to one with the boxes lifted 4 cents a pound. Beans in transparent bags, however, outsold bulk when equally priced, six to one, and with a 3-cent differential still maintained a lead of three to one.

Interviews with purchasers brought out the facts that about 40% of produce was bought on impulse and that convenience, better appearance and the assumption that packaged items are of selected quality were the principal reasons for choosing packaged items.

Recommendations of the Research Committee stressed the vital importance of maintaining highest quality in produce sold in packages and called for continued research on technical details relating to grades of paper-board, types of film, filling and closing machinery, sealing and gluing methods, traffic and merchandising techniques.

Separate, detailed reports on each of the 21 produce items studied will be issued to association members.

20,000 at Cannery Show

The 41st convention of the National Cannery Assn. meeting in Atlantic City the week of Jan. 18 was attended by nearly 20,000 cannerymen, wholesale grocers, food brokers, supply and equipment men. Program discussions centered on endeavors to determine and predict the impacts of ERP on the food industry. Dr. W. I. Myers, dean of the New York State College of Agriculture, Cornell University, pointed out that European recovery will have little short-run effect on the food industry and urged cannerymen to increase their emphasis on production of high quality processed foods.

Of interest to packagers, was the report that during the past year there has been a growing tendency on the part of cannerymen and distributors to adopt the principles of descriptive labeling as developed by the association's Labeling Division.

Elected president for the coming term was Howard T. Cumming, president of Curtice Bros. Co., Rochester, N. Y., succeeding Emil Rutz, president of Schuckl & Co., Inc., Sunnyvale, Calif. Carlos Campbell was continued as secretary and Frank E. Gorrell, founder of the association who, after 38 years as its secretary, retired recently, was pressed into service as treasurer.

CORRECTION: An inadvertent error in a caption on Page 73 of the January issue greatly exaggerated the availability of fibre shipping containers. Supply was approximately 6 (not 60) billion containers in 1947 and is expected to be around 7 (not 70) billion in 1948.

Announcing
Another New Development
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on all
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Machines

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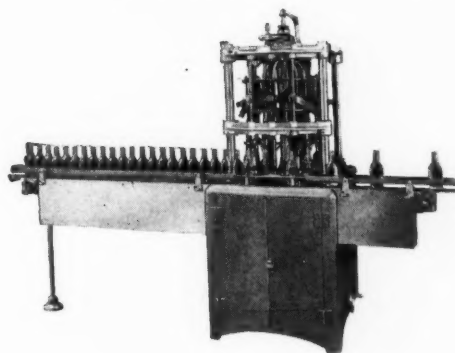
FEBRUARY 1948

mrm machines

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FOR VISCOUS • FOAMY • STILL LIQUIDS

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Affiliated with Breskin Publications — Publishers of
Modern Plastics and Modern Plastics Encyclopedia.

Electronic box stayer

(Continued from page 116) were needed. Arrangements
to rent machines from box manufacturers may be made.

The J. T. Murphy Co. uses this first of the electronic-
sealed acetate boxes to package 20 steel-engraved cor-
respondence notes and envelopes, with a set-up paper-
board base. The informal notes have a small, colorful
floral design engraved in the upper left-hand corner and
the transparent top is, of course, ideal to show off this
merchandising feature. The paperboard base also adds
color, being covered with gold on the outside and lined
with maroon on the inside base. The fact that this
handsome package and its contents sell for \$1 indicates
that the package cost is well within the range of many
similar novelty or gift items.

Previous to adopting the electronically sealed top,
Murphy had used an identical package with the acetate
top set up by a patented method of scoring and folding
without adhesive. While this method offered ad-
vantages over solvent sealing, the blank required 64 sq.
in. of acetate, as against 52½ sq. in. for the electroni-
cally sealed blank—a saving of nearly 20%. The
welded corners also were found to give a more rigid
construction and closer uniformity in dimension. The
latter point was important in this case because a snug
fit was needed to hold the slip-off top of the box on the
paper base.

The Murphy notes originally were packaged in an
opaque paperboard box. When the company changed
to the transparent top, sales quickly jumped to triple
their previous level and production has been hard
pressed to keep up with demand ever since. Since there
is no printing on the box (the Murphy name appears
only on the paper band that encircles the stationery),
Murphy suggests to retailers that they promote it as a
re-use container.

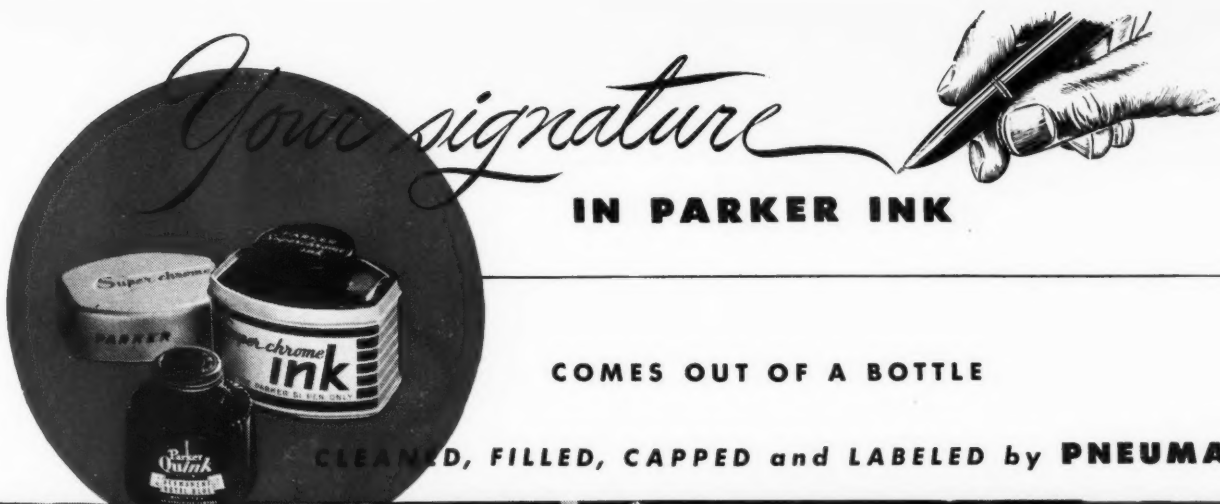
Re-orders indicate that the new package has been
conspicuously successful in such department stores as
Wanamaker's, Gimbels, Jordan Marsh, S. G. Adams
and Famous Barr. During the last month the package
has attracted attention at gift shows in Los Angeles,
San Francisco, Seattle and Buffalo.

The electronic-sealing machine will be displayed by
Eastman at the forthcoming 1948 Packaging Exposition
in Cleveland.

CREDITS: Machine, Spectrum Engineers, Inc., Philadelphia.
Electronic power generator, Radio Corp. of America, Camden, N. J.
Paperboard box and acetate lid, Beggs & Graham, Philadelphia.
Acetate, Eastman Kodak Co., Rochester, N. Y.

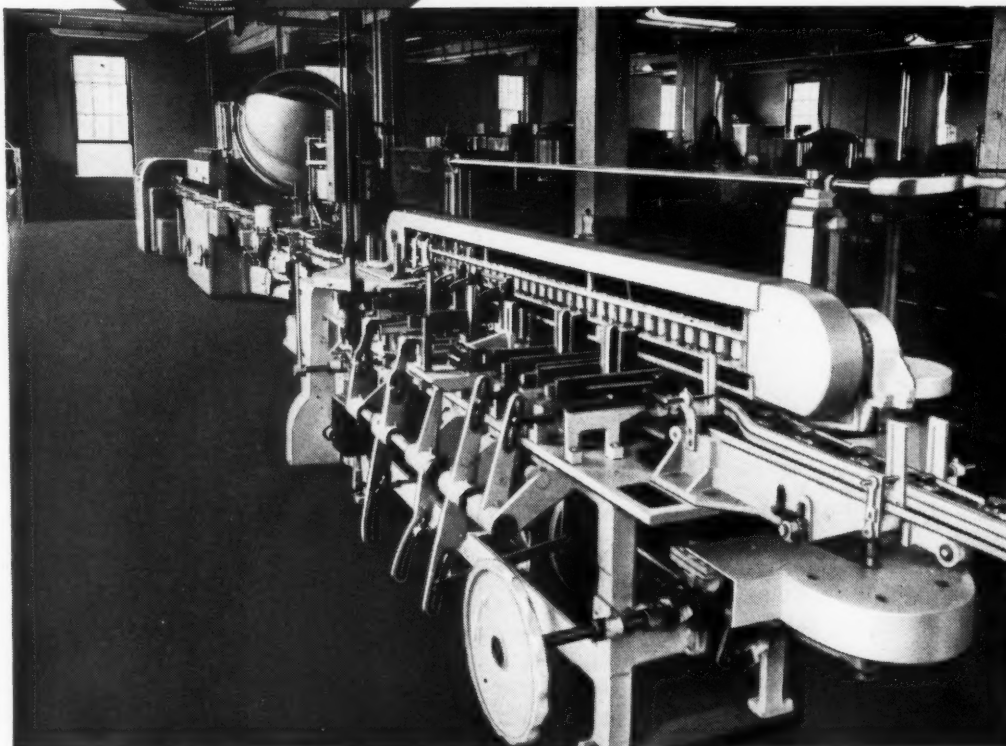
Canada permits box imports

The Canadian Government has deleted from the
schedule of items whose importation has been prohib-
ited, "containers wholly or partially manufactured of
paperboard or fibreboard." Accordingly, paperboard
or fibreboard boxes may now be imported into Canada.



COMES OUT OF A BOTTLE

CLEANED, FILLED, CAPPED and LABELED by PNEUMATIC



One of the Pneumatic lines in operation at Parker's new ink plant in Menomonie, Wisconsin

SHEAFFER'S
WATERMAN
U.S.A., England, France
LE PAGE'S
A. B. DICK
CHANTALOU
HIGGINS
STAFFORD
SANFORD
PARKER
CARTER'S



The price of ink, per bottle, leaves no room for processing inefficiency, if the manufacturer is to realize a profit. Production costs must be closely watched and carefully controlled, down to the last fraction of a penny!

That's the reason why there could be no stronger endorsement or proof of the "Lower Cost Per Container" operation of Pneumatic machines than the fact that the leading ink manufacturers use Pneumatic bottling equipment—and swear by it. And that's true not only in ink but in

the field of foods, pharmaceuticals and many others, where low unit cost demands top bottling efficiency. The experience of these leading producers has proved that the sounder basic design, more accurate machining, more substantial construction of Pneumatic machines pays dividends—every time.

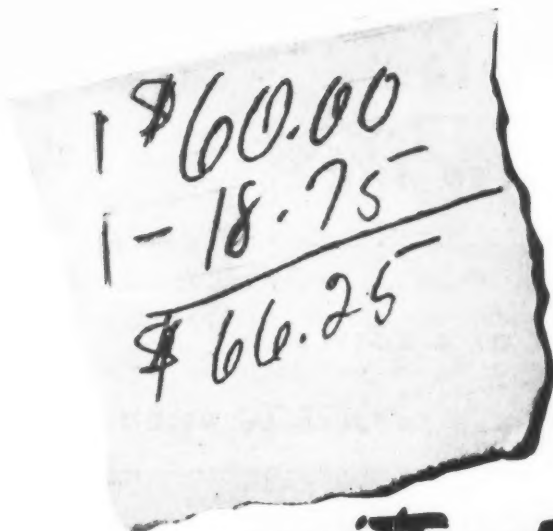
PNEUMATIC SCALE CORPORATION, LTD., 82 Newport Avenue, North Quincy 71, Massachusetts. Branch Offices in New York, N. Y.; San Francisco, California; Chicago, Illinois; Los Angeles, California.

Mr. Willis Rabbe, vice-president in charge of manufacturing of the Parker Pen Co. of Janesville, Wisconsin, says: "We have received very good results from Pneumatic equipment which we first purchased in 1938. Since this first installation—which was a labeling machine—we have purchased filling and capping equipment and we now have a full line in operation. Results from this machinery have been highly satisfactory and the Pneumatic Scale Corp. has given good service".

PNEUMATIC

PACKAGING AND BOTTLING MACHINERY

Over ninety different machines for the packaging of dry, free-flowing products and the cleaning, filling, capping and labeling of containers for liquids and semi-liquids



How 19,000 companies up take-home pay *without upping payrolls*

Can you deduct \$18.75 from \$60.00 and get \$66.25? Yes. And the way you can do it is mighty important to your company—and to the nation!

You start with \$60, representing someone's weekly take-home pay. You deduct \$18.75 for the purchase of a U. S. Savings Bond. That leaves \$41.25. But \$41.25 isn't what the worker takes home. He takes home \$41.25 *plus* a \$25 Savings Bond. Total (assuming he holds the Bond till maturity): \$66.25.

WHAT 19,000 COMPANIES HAVE LEARNED

In the 19,000 companies that are operating the Payroll Savings Plan for the regular purchase of Savings Bonds, employees have been more contented in their jobs—absenteeism has decreased—even accidents have been fewer!

Those are the "company" benefits the Plan provides, in addition to extra security for individual employees.

But the Plan has other, far-reaching benefits of basic importance to both your business and the national economy...

SPREADING THE NATIONAL DEBT HELPS SECURE YOUR FUTURE

The future of your business is closely dependent upon the future economy of your country. To a major extent, that future depends upon management of the public debt. Distribution of the debt as widely as possible among the people of the nation will result in the greatest good for all.

How that works is clearly and briefly described in the free brochure shown at the right. Request your copy—*today*—from your State Director of the U. S. Treasury Department's Savings Bonds Division.

ACTION BY TOP MANAGEMENT NEEDED

The benefits of regular Bond-buying are as important today as ever—but war-time emotional appeals are gone. Sponsorship of the Payroll Savings Plan by a responsible executive in your company is necessary to keep its benefits *advertised to your employees*.

Banks don't sell Savings Bonds on the "installment plan"—which is the way most workers prefer to buy them. *Such workers want and need the Payroll Savings Plan.*

Those are the reasons why it's important to make sure that the Plan is adequately maintained in your company.

The State Director will gladly give you any assistance you wish.

"The National Debt and You,"

a 12-page pocket-size brochure, expresses the views of W. Randolph Burgess, Vice Chairman of the Board of the National City Bank of New York—and of Clarence Francis, Chairman of the Board, General Foods Corporation. Be sure to get your copy from the Treasury Department's State Director, Savings Bonds Division.



The Treasury Department acknowledges with appreciation the publication of this message by

MODERN PACKAGING

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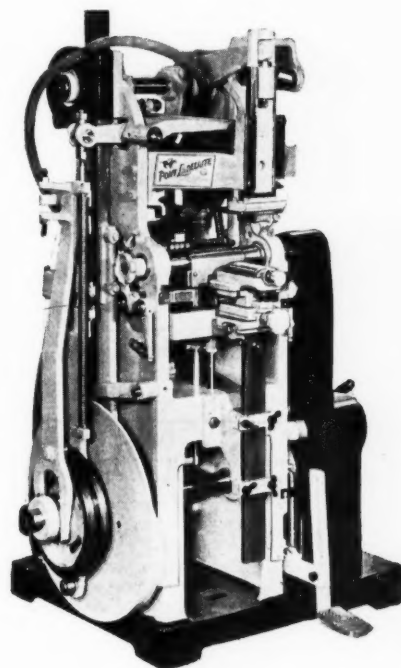
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**1. VACUUM
LABEL FEED**

Label is immovably held by vacuum, as it travels from hopper to container, across glue-roller in a straight line. Perfect alignment between hopper and container makes **PERFECT REGISTER** certain.

**2. TWIN ROLLER
GLUE CONTROL**

Micro-film of adhesive prevents any excess glue on labels. Provides immaculate labeling and **NO WIPING OF CONTAINERS** is required.



All classified advertisements payable in advance of publication. Rates: \$5.00 up to sixty words, enclosed in border, \$10.00 per inch.

Classified Advertisements

Publication reserves the right to accept, reject or censor a classified copy.

WANTED: Corrugated-Container Superintendent. Our client in the Middle West is asking for a man with a college degree and several years successful supervisory experience in a corrugated container plant. The salary will depend wholly upon the man's background of accomplishments. Address in confidence Charles P. Raymond Service, Inc., 294 Washington St., Boston, Mass.

DISTRICT SALES managers men 35-45 to work with and supervise manufacturers representatives on sale of metal and plastic screw caps. Some knowledge of caps and containers and acquaintance with packaging trade essential. Salary, commission and travel expense. Car necessary. Box 643, Modern Packaging.

REPRESENTATIVES WANTED for power-driven volumetric filling machine. Must be established and now selling non-competitive related packaging machinery. Reply stating full particulars, including experience, coverage, present scope of activity in terms of equipment and frequency of contacts. Full-time representation only. Box 644, Modern Packaging.

SITUATION WANTED: Pressman with 20 years' experience desires supervision. Past 10 years on Aniline, Letter Press, Rotogravure Presses. Thoroughly experienced in all phases of cello, glassine, foil, etc., printing. Capable of complete management. Box 645, Modern Packaging.

SALES REPRESENTATIVES desired by manufacturer of electronic sealing equipment for transparent containers. Exclusive territories on commission basis are available to men with proper contacts in the box and packaging fields. Box 646, Modern Packaging.

WANTED: 300 PT cellophane. In sheets 36" x 40", 38" x 40", 40" x 40". Box 652, Modern Packaging.

ENGINEER WITH experience in design of paper bag and other paper converting equipment, aniline printing press experience also desirable. Position also involves field work and development of special equipment. Midwest manufacturer desires energetic individual to assume complete charge Engineering Department. Splendid opportunity to work into worthwhile responsible position limited only by his own efforts. Reply immediately Box 649, Modern Packaging.

EXTREMELY ATTRACTIVE territories available in Ohio for live-wire packaging representatives. Folding carton experience would be helpful, but not essential. Our men know of this ad. Box 650, Modern Packaging.

WANTED TO BUY: 50 x 69 LSC 2-Color Offset Press complete with roller and electrical equipment. Reply Box 651, Modern Packaging.

SALESMEN: Preferably with experience selling laminated and coated products such as are listed in our advertisement in this issue of Modern Packaging. Excellent territories available to right parties. State qualifications, age, experience and territory covered in first letter. Also if interested in salary or commission and amount. Floyd A. Holes Company, Bedford, Ohio.

SALESMAN to sell Aniline Rotogravure printed paper for large paper manufacturer and converter. Must have access to buyers of labels, box coverings, gift and specialty wrappings, decorative papers. Write giving full details and salary expected. Box 641, Modern Packaging.

FOR SALE: One Semi Automatic Junior World Body Labler. One Improved Semi Automatic World Labler \$250.00 each, f. o. b. our factory, good working condition. Reply Box 661, Modern Packaging.

WANTED—DEVELOPMENT and Promotion Manager for Folding Box Division of nationally known manufacturing concern. Folding Box Sales experience, preferably in a sales executive capacity, and knowledge of Folding Box Production Methods desired. Please state age, education and experience. Replies treated confidentially. Write Box 653, Modern Packaging.

WANTED: MANUFACTURER'S Representative for polyethylene bags—flexible, transparent, heat sealed plastic bags; ideal for packaging frozen foods, drugs, cosmetics, tools, hardware, etc. Liberal commission basis. Box 647, Modern Packaging.

WANTED—ESTABLISHED salesman to handle an extra line on commission. We manufacture high grade set up paper boxes for every need. We require a salesman for Philadelphia, Pa., one for Newark, N. J., and one for New England. This will make an excellent side line, especially if you are calling on similar trade. Box 654, Modern Packaging.

WE HAVE a few more openings for Salesmen with corrugated box experience. Qualified persons interested in making application for these positions should send detailed resume to: F. M. Brazier, Union Bag & Paper Corp., Woolworth Building, New York 7, N. Y.

"HORNE-BILT" packaging conveyors, for bottles, jars, cartons, cans. Prompt delivery. Furnished interchangeably with "Rex" Table-Top Conveyor Chain, Canvas or Rubber Belting, in standardized bolted sections for lengthening or shortening. Also Transfer Discs, Accumulating Tables, Unscramblers. Many exclusive engineering features. Write for descriptive bulletin and price-list. **DEALERS:** Choice territories available. Horne Machinery Co., Inc., 1188 Harrison St., San Francisco 3, Calif.

CHICAGO REPRESENTATIVE available for glass containers, all types, closures, cartons, or packaging material. Aggressive, sincere, 32 years old, 10 years' experience contacting the Food, Drug and Cosmetic trade. Have a practical background of varied experience in Food processing and a wide technical knowledge of container, closure, carton and basic packaging problems. Reliable reference and full details given. Box 655, Modern Packaging.

RIBBON SALESMEN with good educational background. Well established manufacturer and distributor of exclusive ribbons and foils desires aggressive, experienced salesmen, preferably with college education. Liberal commissions. We serve florists, department stores, gift, candy, jewelry, liquor and variety chains and shops. Territories open:

- 1—New York and New Jersey
- 2—Ohio and Michigan
- 3—Virginia, N. C., S. C., Georgia, Alabama and Mississippi

All replies held in strictest confidence. Box 656, Modern Packaging.

FOR SALE: New Hayssen 4-8 carton wrapper, electric eye. Never used. Wrapping head for package 1 1/8 inches high. Maximum package size 4 x 5 x 8. Box 657, Modern Packaging.

FOR SALE. Heat seal bag machinery. Simplex high speed automatic bag machines with Duplex attachments and electric eyes. Also Simplex Model 7 bag machines electric eye equipped. New. Have never been taken out of original cases. Have changed operating plans. Bargain. Tension Envelope Corp., 19th and Campbell Sts., Kansas City 8, Mo.

PACKAGING MACHINE for sale. Packaging machine Universal 5. Used only two months. Adjustable to wide range of packaging sizes. Has extended intake conveyor with automatic U-card feed. Heat seals. Battle Creek model 46. Good condition, complete with electric eye. Wraps and heat seals 60 to 80 packages per minute. Box 658, Modern Packaging.

PACKAGING REPRESENTATIVE with fifteen years experience in the packaging field, and a successful sales record. Expanding present activities, is interested in representing a reputable manufacturer of flexible packaging in the territory comprising eastern Pa., Maryland, Washington, D. C. and Virginia. Box 659, Modern Packaging.

FOR SALE: Model WF (Stokes & Smith) Wrapper, gluer, and suction conveyor, in good condition. Robinson—3 speed double scorer—in good condition. Quality Paper Box Co., 16 New Street, East Boston 28, Mass.

SITUATION WANTED—Rotogravure Executive seeking change where unusual experience resulting from over 25 years' experience in every phase of the business, covering creative sales estimating production-management, can be used to best advantage. Box 660, Modern Packaging.



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Surveys have proved that eye appeal is synonymous with sales appeal!

Yes, and OLD DOMINION BOX COMPANY has proved its name is synonymous with appealing packages! Because Old Dominion's creative staff is constantly designing new sales-building boxes and because of its extensive product research and complete

packaging service, more and more manufacturers are bringing their packaging problems to Old Dominion.

Whether your preference is for folding cartons, canisters, gift boxes, set-up boxes, or visi-tainers, *plan* to put more eye-appeal in your package! *Plan* to consult Old Dominion. Send for General Line Folder No. 85.



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CHARLOTTE, N. CAROLINA

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Are paper problems knocking you flat? Are you burned up by the problem of how to package your product so that resistance to moisture-vapor transmission will be adequate? Do you need non-toxicity, grease-proofness, water repellence or more chemical resistance? Is dehydration or evaporation loss giving you a headache? Should your

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Name the date and the hour, and the Mead Paper Man will roll up his sleeves and start working for you.

NEW PRODUCTS DIVISION

THE MEAD CORPORATION

CHILLICOTHE, OHIO

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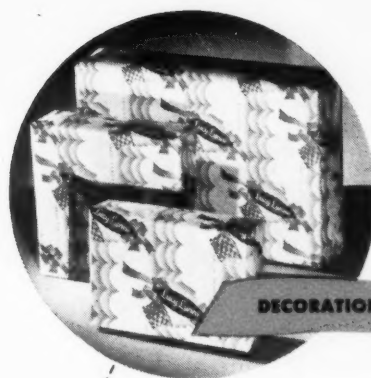
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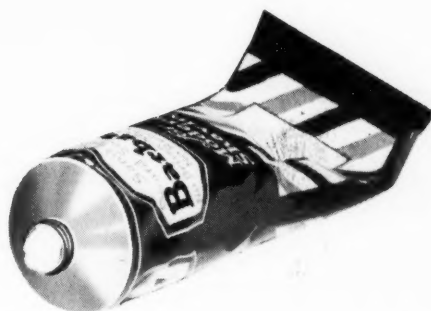
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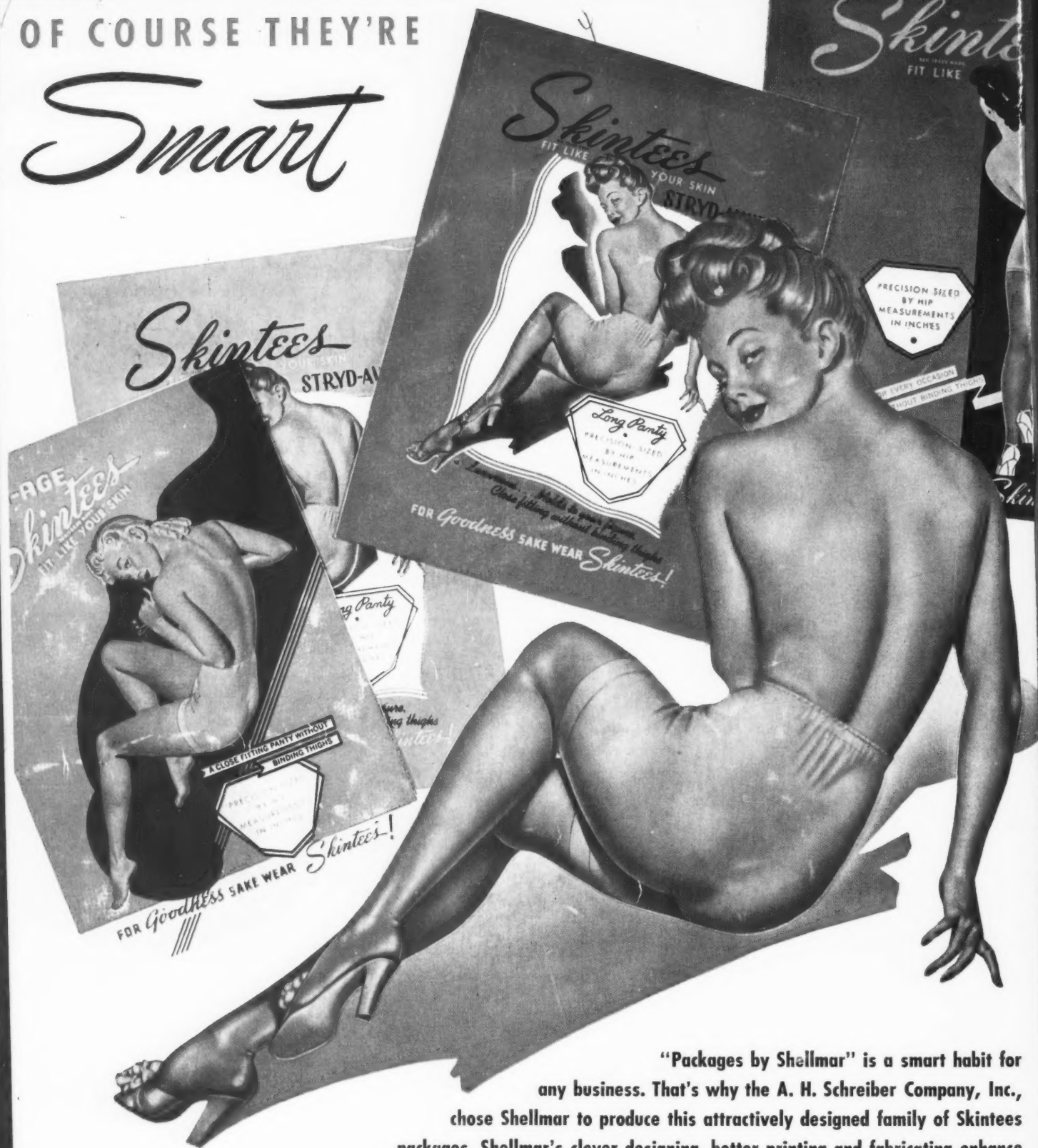
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